

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

UMG RECORDINGS, INC., ET AL, :
Plaintiffs, :
vs. : Case Number:
: 1:17-CV-00365-DAE
GRANDE COMMUNICATIONS : Austin, Texas
NETWORKS, LLC, ET AL, : October 14, 2022
Defendants. :

TRANSCRIPT OF JURY TRIAL PROCEEDINGS
BEFORE THE HONORABLE DAVID A. EZRA
SENIOR UNITED STATES DISTRICT JUDGE

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JURY TRIAL PROCEEDINGS

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JURY TRIAL PROCEEDINGS

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1 (October 14, 2022, 9:01 a.m.)

2 * * *

3 COURT SECURITY OFFICER: All rise.

4 THE COURT: Please be seated.

5 COURTROOM DEPUTY CLERK: Austin, 17-CV-365, UMG
6 Recordings, et. al, versus Grande Communications.

7 THE COURT: All right. Good morning, and the Court
8 would note the presence of all counsel, the respective parties
9 and the ladies and gentlemen of the jury.

10 Good morning, ladies and gentlemen. Before you came
11 in today, I had to have a quick chat with the lawyers to advise
12 them that I have to step off the bench at 11:45 this morning
13 because I have to meet with the senior active judge here in
14 Austin, Judge Yeakel. Because I split my time between San
15 Antonio and Austin and I have a chambers and a courtroom in
16 both places, I need to get -- I'm not on the wheel here, so I
17 need to get cases from the judges. Just like this case was
18 transferred to me, to help.

19 So I need to talk to him about the next batch of cases
20 I'm getting. So that's what it's all about. And he's going to
21 be out of town next week, so you know how everybody gets out of
22 town for ACL. I had no trouble driving in today. It was
23 unbelievable. I think everybody left.

24 Okay, counsel. Are you ready to continue?

25 MR. O'BEIRNE: Yes, Your Honor.

1 THE COURT: I think you're doing your examination,
2 cross-exam.

3 MR. BROPHY: That's correct, Your Honor. Thank you.

4 THE COURT: And you remain under oath, sir.

5 THE WITNESS: Yes.

6 THE COURT: Thank you for returning this morning.

7 You may proceed.

8 MR. BROPHY: Thank you, Your Honor.

9 CROSS-EXAMINATION CONTINUED

10 BY MR. BROPHY:

11 Q. Mr. Boswell, good morning.

12 A. Good morning, Mr. Brophy.

13 Q. Let's start by talking about your work experience very
14 briefly. Have you ever worked for an Internet service
15 provider?

16 A. No, I have not.

17 Q. Have you ever done any network engineering?

18 A. Outside of our own system?

19 Q. Outside of the systems at Rightscorp.

20 A. No, I have not.

21 Q. When I use the phrase "network engineering," does that have
22 a meaning to you?

23 A. That would be someone who works on connecting of the
24 different routers and pieces of hardware throughout the system.

25 Q. Would you agree with me that also includes designing

1 infrastructure and designing how those computers are going to
2 all be interconnected?

3 A. That is correct.

4 Q. That's the kind of work that some of the people at
5 Grande -- let me posit it better.

6 That's the kind of work that someone at an Internet service
7 provider would do, do you agree?

8 A. I agree.

9 Q. Among other things, obviously. Do you know how much data
10 is transferred through Grande's network in a day?

11 A. I have no knowledge of how much data is transferred.

12 Q. Would you agree with me that it's probably a lot?

13 A. Probably.

14 MR. O'BEIRNE: Objection. Foundation, Judge.

15 THE COURT: Well, he said, "*Probably a lot.*" I think
16 we can probably all agree that it probably is a lot, so I don't
17 think that's a problem.

18 BY MR. BROPHY:

19 Q. Switching gears just a little bit, I want to go back to
20 something that you mentioned yesterday. We were talking about
21 the Samplit 2 program and its ability to go out and collect
22 songs from individual accused music sharers. Do you remember
23 that?

24 A. It goes out and collects songs from people it sent notices
25 to. I recall that.

1 Q. How much of a delay is there between when Rightscorp claims
2 it reaches out and detects music sharing and when the Internet
3 service provider receives the e-mail accusation?

4 A. The notice can come as quickly as five minutes and no later
5 than 24 hours, for the most part.

6 Q. What governs how much time it takes for that e-mail to get
7 to the ISP?

8 A. What governs it is just hardware. If the hardware is
9 swamped, it might take a little longer. If a piece of hardware
10 went down, then it would be 24 hours.

11 Q. And you're referring to hardware within Rightscorp's
12 system; is that right?

13 A. That is correct.

14 Q. Do you have any information about how long it takes for an
15 Internet service provider to receive and process those e-mails?

16 A. I do not have any information on that.

17 Q. I believe yesterday we established that during your
18 deposition you did not know a way for Grande to independently
19 verify Rightscorp's accusations, right?

20 A. I said I now know a way for Rightscorp's -- for Grande to
21 independently verify Rightscorp's accusations.

22 Q. But my question is a little bit different. Back in August
23 of 2018, you testified you did not know of a way, correct?

24 A. I testified at that moment in time I did not know of a way.

25 Q. My understanding is that subsequent to that, you believe

1 you do understand there's a way; is that right?

2 A. That is correct.

3 Q. What is that way?

4 A. Surely. Well, as I just told you, sir, I looked at it from
5 the ISP point of view. When a notice comes in, the ISP has the
6 IP import, and they have the time stamp of which this takes --
7 this infringement takes place. They also have the torrent hash
8 number -- the torrent hash. They simply could do one of three
9 different ways to do it, technically.

10 First, they could look at their logs within the period of
11 time and see if those -- if that information had taken place.
12 If that information had transpired.

13 Secondly, they could jump on their version of Wireshark
14 since they own all the hardware in the system. Wireshark does
15 have the capability of being inside a network and having a
16 sniff mode, and they could sit down at their version of
17 Wireshark and sniff the communications from that port and that
18 IP to see if something was happening.

19 Thirdly, they could do like MarkMonitor apparently does and
20 fire up a laptop, fire up BitTorrent, put in the port in the IP
21 and connect for that -- to that port and IP and ask for that
22 torrent. So there are three ways they could technically do it
23 in near real time. And with the multi-infringers, we know that
24 the multi-infringers are sharing over a very long period of
25 time. They could sit there with the notification that we've

1 told them that, Hey, look at this guy. This guy is doing
2 something, and they're doing a lot. They could sit there just
3 with the Wireshark model or any of the three technical models
4 and look at that traffic and identify it. Since the traffic is
5 not encrypted, the information should be readily available.

6 Q. Okay. Let's break all that down.

7 A. Okay.

8 Q. Number one, you indicated that because Rightscorp sends its
9 e-mail, the ISP has the time stamp of when it takes place,
10 right?

11 A. This is correct.

12 Q. The time stamp in Rightscorp's notice, that's when
13 Rightscorp reached out, correct?

14 A. That is correct.

15 Q. No file is transferred, correct?

16 A. The BitTorrent field is transferred.

17 Q. But no song file is transferred, correct?

18 A. There was no payload transferred at that moment.

19 Q. There's no other time stamp within Rightscorp's notices,
20 correct?

21 A. There is no other time stamp for that handshake in that
22 notice.

23 Q. So the ISP doesn't know when to look for the song transfer,
24 correct?

25 A. The time stamp is in GMT time, sir, and they should have no

1 problem looking for when the handshake took place in the bit
2 fields that were transferred.

3 Q. That wasn't my question, though. Does the ISP know of a
4 date and time when the song was actually transferred?

5 A. Do they know of a date and time -- well, not to us.

6 Q. So Rightscorp didn't tell Grande on July 13, 2016 at
7 8:13 a.m., this song went from A to B, right? Rightscorp
8 didn't send that message?

9 A. Did not send that message.

10 Q. So Grande has to guess the time for when the song was
11 transferred, if at all, right?

12 A. Sir, we've notified Grande that there is something taking
13 place on their system, and they can look and monitor, because
14 we've given them digested information to do so.

15 Q. We'll get to that. But answer that question that I asked
16 first. Grande has to figure out when or if a song was ever
17 transferred in the first place, right? Rightscorp does not
18 provide that information to Grande?

19 A. Not in that notice.

20 Q. You mentioned that the ISP can quote/unquote, look at their
21 logs. Do you remember that?

22 A. Yes, I do.

23 Q. What logs are those?

24 A. Those would be the network traffic logs.

25 Q. Is it your understanding that an ISP keeps logs of every

1 single piece of network traffic that travels through its
2 network?

3 A. It is my understanding that most people do. Most
4 Unix-based systems keep a log for 24 hours of traffic that
5 takes place on their system.

6 Q. So you never worked for an ISP, right?

7 A. No, sir, I have not.

8 Q. And you certainly don't know whether Grande has those logs,
9 right?

10 A. I have no firsthand knowledge, sir.

11 Q. Now, would the logs -- if you know -- would the logs
12 actually show what the data that was transferred is?

13 A. Depending on the level of the logs, sir.

14 Q. Do you know what level of logs would be required to extract
15 that information?

16 A. That, I do not know, on their system.

17 Q. And you certainly don't know whether Grande has that level
18 of logs, right?

19 A. I do not know what level of logs Grande has.

20 Q. And you also don't know whether Grande has the logistical
21 capability to keep track of that much data for all its users,
22 right?

23 A. That, I do not know.

24 Q. You mentioned that ISPs can use, quote, *"their version of*
25 *Wireshark."* Do you remember that?

1 A. Yes, I do.

2 Q. What version is that?

3 A. Whatever version they have of Wireshark.

4 Q. How do you know they have Wireshark?

5 A. Wireshark is downloadable and comes with almost every Unix
6 operating system by simply just doing a install.

7 Q. You don't know that they have Wireshark, right?

8 A. They can get it.

9 Q. You don't know that they have it, right?

10 A. I do not know what they have installed on that system.

11 Q. So there's that delay between when the e-mail is sent by
12 Rightscorp or when the detection happens and when the ISP is
13 notified, correct?

14 A. There's a delay, yes.

15 Q. And it could be as much as 24 hours, right?

16 A. It could be as much.

17 Q. Would you agree with me that in order to do what you're
18 suggesting, the ISP would need to save all the data transmitted
19 through its network for a 24-hour period?

20 A. All the data? It's entirely possible. The logs of.

21 Q. Sorry, are you finished?

22 A. The logs of. I'm sorry.

23 Q. The logs of. And that assumes the logs can even be used to
24 discern whether the song was the thing that was transferred,
25 right?

1 A. The logs of the communications would most likely be kept.
2 The logs of -- in most cases, one would think, for 24 hours.
3 The logs of the payloads may not be kept.

4 Q. Right. And so as a result of that, Grande would need to
5 keep all the data that passes through its network for a 24-hour
6 period, right?

7 A. Well, if we notified them of a notice, they could at that
8 point start to log the communications of that IP and port.

9 Q. How many notices does Grande get a year, do you know?

10 A. Do not know.

11 Q. Do you know how many Rightscorp sends in a year?

12 A. Do not know.

13 Q. Do you have any ballpark for that?

14 A. No, I don't, actually.

15 Q. More than a thousand?

16 A. Oh, definitely.

17 Q. More than 10,000?

18 A. More than 10,000.

19 Q. More than a hundred thousand?

20 A. Probably, yeah, definitely.

21 Q. A million?

22 A. Over this period of time, we are looking -- from this
23 three-year window, I believe we're looking at 1.35 million.

24 Q. I think in your opening testimony with the plaintiffs, you
25 indicated that, from your perspective, Grande isn't the only

1 one sending -- pardon me, Rightscorp isn't the only one sending
2 Grande notices, right?

3 MR. O'BEIRNE: Objection. Foundation, Judge.

4 THE COURT: Sustained.

5 BY MR. BROPHY:

6 Q. Is it your understanding that Grande receives notices from
7 other notice companies?

8 MR. O'BEIRNE: Judge, it gets into irrelevant
9 testimony about other companies.

10 THE COURT: Sustained.

11 MR. BROPHY: Your Honor, during his testimony already
12 yesterday, he testified that Grande receives notices from other
13 monitoring companies. The PowerPoint slides they showed had
14 notices from monitoring companies, plural. He has absolutely
15 testified --

16 THE COURT: I don't remember a name. Was there
17 another name?

18 MR. BROPHY: I'm not going to go into the names, Your
19 Honor. I just want to establish --

20 THE COURT: I'm not asking -- you're not going into
21 the names.

22 MR. BROPHY: I'm sorry.

23 THE COURT: Was there another name mentioned?

24 MR. BROPHY: I don't remember.

25 THE COURT: They're just monitoring companies?

1 MR. BROPHY: I don't remember, Your Honor.

2 THE COURT: I don't remember that either.

3 MR. O'BEIRNE: Neither do I, Judge, but we don't
4 believe he has foundation for what notices other than
5 Rightscorp.

6 MR. BROPHY: I'm happy to move on, Your Honor.

7 THE COURT: All right.

8 BY MR. BROPHY:

9 Q. So Mr. Boswell, at a bare minimum, Grande would need to
10 keep all the traffic from all the IP addresses for which they
11 receive a notice, right?

12 A. For that period of time, yes.

13 Q. Well, and for more than 24 hours, right? Because we may
14 get a notice from Rightscorp on day three, and that alerts us
15 that we have to look at them. And then we have to keep their
16 data day after day until Rightscorp decides to send another
17 e-mail, right?

18 A. That would be a function of their business decisions and
19 calculations.

20 Q. Well, if Rightscorp sends an e-mail on day one --

21 A. Okay.

22 Q. -- and alerts Grande, in your view, that it should be
23 looking at an IP address, it could be three or five days before
24 Rightscorp sends another notice, right?

25 A. Yes, but --

1 Q. It could be --

2 A. -- but we're just asking them, Hey, that this port -- this
3 IP in this port, that log filing should be substantially
4 lighter. In other words, we're asking them to look at this IP
5 and this port. That's not their port 80. That's not their
6 port 25. That's not their port 110. It's that port.

7 Q. So that's for every single IP address that Grande receives
8 a notice for, right?

9 A. This is an option for them to do, yes.

10 Q. And for multiple days. Because we have to be capable of
11 screening or detecting when we get an e-mail three days later
12 or five days later or 20 days later, right?

13 A. That is -- you're asking me to make a decision on their
14 business and their -- what their counsel would have them do.

15 Q. Well, sir, you're the one who said that they could do this,
16 so I'm trying to understand how they would do it.

17 A. I'm just telling you that they could look at their logs,
18 sir.

19 Q. Well, not the logs, right? Because we don't know that the
20 logs actually show the answer, right?

21 A. Well, I'm looking at -- we do not know what they're keeping
22 in their logs.

23 Q. And so as a result of that, from your perspective, with
24 what you know, they would have to keep all the data, right?

25 A. All the data for that port and IP.

1 Q. For every single notice they receive, right?

2 A. Correct.

3 Q. For multiple days, right?

4 A. Correct.

5 Q. And then they would have to employ people to go through all
6 that data, right?

7 A. Sir, this is software. It's a simple scan and compare.

8 Q. Someone is doing the scan, and someone is looking at the
9 outputs, right?

10 A. A competent programmer could write the code to do that in a
11 week and just have it running in the background.

12 Q. Do you know -- because you've never worked at an ISP.
13 We've established that, right?

14 A. That's correct.

15 Q. So you don't know how much manpower it would take to deal
16 with all of that administration, right?

17 A. Sir, the logs are fairly straightforward. They would be
18 able to write a piece of code and make a digest of the
19 information.

20 Q. I want to focus back on that Samplit 2 program for a
21 moment. Just to reorient the jury, Samplit 2 is the program
22 that goes out and tries to download songs after the notices
23 that Rightscorp sends, right?

24 A. This is correct.

25 Q. And isn't it true that you instructed Rightscorp's system

1 to go out and get as many songs as it could from Grande?

2 A. I directed the system to look at specific ISPs, Grande
3 being one of them.

4 Q. And so the set of downloads that you claim Rightscorp
5 collected in this case is not the result of Rightscorp's
6 ordinary, run-of-the-mill, random activity, correct?

7 A. Samplit cannot be a random activity thing. There is
8 substantially too much piracy on the Internet and would
9 substantially overwhelm our ability to store all the downloads.

10 Q. I believe your testimony was that in a typical situation,
11 the Samplit 2 program just picks notices at random to go out
12 and try to download a song for it; is that right?

13 A. With -- it is with the caveat of being a specific domain of
14 area we're looking.

15 Q. Okay. So the downloads that we have in this case are the
16 result of Rightscorp's effort to acquire as many songs as
17 possible for the notices that Rightscorp sent to Grande, right?

18 A. The -- what you have is a sampling of notices that were
19 sent to Grande. The Samplit system did not run looking at
20 Grande for the three-year period of time that's coming in.

21 Q. What logs does Rightscorp keep that indicate when Samplit 2
22 was targeting Grande?

23 A. The Samplit download contains that information of when we
24 were looking in that specific area.

25 Q. The Samplit download, you said?

1 A. The file should contain that information.

2 Q. Well, that's not the question I'm asking. If I understand
3 your testimony correctly, you're saying, well, we can look at
4 the downloads and from that determine that Samplit 2 was
5 downloading, right?

6 A. That's correct.

7 Q. Okay. But we don't know how many times Samplit 2 tried to
8 download. We only know, according to you, how many times
9 Samplit 2 actually downloaded, correct?

10 A. We've discussed this, yes.

11 Q. So there is no log that Rightscorp has that reflects when
12 you turn Rightscorp's scopes on Grande and try to pull down
13 songs and when you turned the scopes somewhere else, right?

14 A. There is no log that indicates what time any domain we were
15 looking at we were downloading from.

16 Q. So if I asked you -- and you're not able to do this, but if
17 I asked you to head back to Rightscorp's offices and look
18 through the logs to determine the date on which you started
19 trying to get downloads from Grande and the date on which you
20 stopped trying to get downloads from Grande, you couldn't do
21 that, right?

22 A. In the deliverable, it indicates the dates that we started
23 downloading from Grande, give or take a day, and the dates we
24 stopped downloading from Grande.

25 Q. Again, that's because you're using the date of an alleged

1 download to try to recreate that time period, is that right?

2 A. No. When the data was produced, when it was produced to
3 counsel, it contained the dates of when those items were
4 downloaded.

5 Q. Right. So you're using the date of the downloads to
6 dictate the dates that Samplit 2 was running, is that right?

7 A. By definition, Samplit 2 was running in those dates.

8 Q. But you don't have separate records of when Samplit 2 was
9 actually aimed at Grande and when Samplit 2 wasn't, is that
10 right?

11 A. Again, sir, the dates are memorialized in the product that
12 was delivered.

13 Q. Do you know how many individual IP addresses of Grande's
14 Rightscorp accused of sharing music?

15 A. I do not know how many individual IP addresses Rightscorp
16 has sent notices on, sir.

17 Q. If I told you that it was roughly 9,000 in this case, would
18 that surprise you?

19 A. No.

20 Q. And do you know how many Grande customer IP addresses
21 Rightscorp was able to download songs from?

22 A. Not while sitting here at the stand.

23 Q. If I told you it was roughly 500, would that surprise you?

24 A. No.

25 Q. Does the difference between the roughly 9,000 accused

1 subscribers and 500 that Rightscorp alleges it could download
2 from surprise you, that difference?

3 A. Well, sir, as I told you, the Samplit program does not run
4 24/7, and it does not run at the same level that the notice
5 generation aspect of Rightscorp does. So considering the fact
6 that the Samplit program was running at a much smaller scale
7 with much fewer resources, over a much shorter period of time,
8 500 is probably normal.

9 Q. So let's talk about that period of time. Do you know how
10 long Samplit 2 was trying to download songs from Grande's
11 customers?

12 A. Sir, I've answered that. It's already defined in the
13 deliverable items.

14 Q. Do you have the date range in your mind?

15 A. No, I do not, sir.

16 Q. Do you have any rough approximation whether it's weeks,
17 months, years?

18 A. Sir, I don't have the date range in my mind.

19 Q. Okay. We're going to switch gears a little bit. We're
20 going to talk about bit fields.

21 In early 2014, you said Rightscorp system would only send
22 an e-mail if a computer in question had a hundred percent of
23 the payload, is that right?

24 A. Hundred percent of the bit field log.

25 Q. Hundred percent of the bit field?

1 A. Right.

2 Q. In November of 2014, you lowered that threshold to
3 10 percent, right?

4 A. We had a short period of time where we looked at the
5 10 percent bit field as a possibility, and we sent notices on
6 10 percent, for a short period of time.

7 Q. How long was that?

8 A. Weeks.

9 Q. Weeks. So weeks in November of 2014?

10 A. Correct. I believe that -- I'm relying on you providing me
11 the year, but, yes, weeks in 2014, I believe.

12 Q. And the result of you lowering that threshold -- let me ask
13 a different question.

14 You did that personally, right?

15 A. I did that with the consultation of the Business
16 Department, Robert Steele.

17 Q. So Robert Steele, was he your boss at the time?

18 A. Yes, he was.

19 Q. And he was the one that told you to lower that threshold?

20 A. Yes, he did.

21 Q. And the result of you lowering that threshold was that
22 Rightscorp sent more e-mails, right?

23 A. I don't believe we did send more e-mails, sir.

24 MR. BROPHY: May I approach, Your Honor?

25 THE COURT: Sure.

1 BY MR. BROPHY:

2 Q. Mr. Boswell, do you remember giving testimony in another
3 trial related to the Rightscorp system in December of 2015?

4 A. The Cox trial? Yes, sir, I do.

5 Q. And the attorney in that case asked the question, *"And the*
6 *effect of the --"*

7 MR. O'BEIRNE: Sorry, counsel. Can we get a line and
8 page number so I can --

9 MR. BROPHY: Oh, I apologize. Yes, excuse me. Page
10 948, lines 9 through 14.

11 MR. O'BEIRNE: May I have an opportunity to look
12 before you -- 948, page?

13 MR. BROPHY: Page 948, lines 9 to 14.

14 THE WITNESS: Oh, okay.

15 BY MR. BROPHY:

16 Q. So the attorney in that case asked the question, *"And the*
17 *effect of the 10 percent bit field threshold, Mr. Boswell, is*
18 *to change how your system identifies an alleged infringer,*
19 *right?"*

20 A. That's correct.

21 Q. And you had answered, *"It changes -- it changes the notice*
22 *at what point the notice is sent."*

23 And then the attorney asked, *"And more notices go out,*
24 *right?"*

25 And your answer was, *"In that case, yes."*

1 You see that?

2 A. Yes, sir. From seven years ago, I probably had a better
3 recollection.

4 Q. Mr. Boswell, if you changed the threshold from a hundred
5 percent to 10 percent, the system sends more messages, and
6 that's true today, just as it was true back when you gave this
7 testimony, right?

8 A. When I gave that testimony, there was -- yes, more notices
9 went out, but obviously not a tremendous amount.

10 Q. And that's a fundamental truism of your system. It doesn't
11 matter whether this was 2015 or yesterday. If you lower the
12 threshold, the system sends more e-mails, right?

13 A. In this day and age, sir, most people who are sharing bit
14 field information have a hundred percent notices. So they have
15 a hundred percent bit field, so it wouldn't matter, but we send
16 out a hundred percent.

17 Q. Sir, no matter what, if you lower the threshold, it sends
18 out more e-mails, right?

19 A. If we were to lower the threshold today, very few more
20 e-mail notices would go out because most people are sharing a
21 hundred percent of the bit fields.

22 Q. Very few more is still more, isn't it?

23 A. One or two or three, yes.

24 Q. You don't have any basis for saying one, two, or three,
25 right? You have no idea?

1 A. No. I'm just going by the standards of how Internet -- how
2 BitTorrent is going these days.

3 Q. And as a result of that, the Rightscorp system would accuse
4 someone of sharing music that it would not otherwise have
5 accused of sharing music, right?

6 A. And that point in time, the Rightscorp system, based off
7 the fact that they shared 10 percent of their notice -- their
8 bit field with us, would indicate that they would -- had the
9 torrent, and we would send a notice based off.

10 Q. I'm going to be really clear about this. There are
11 instances in which, if you applied the 100 percent bit field
12 test, an e-mail would not go out, but once you lowered it to
13 10 percent, the e-mail would go out, is that right?

14 A. That would be correct.

15 Q. And that represents an instance in which because you
16 changed the system, Rightscorp sent more notices, right?

17 A. Yes.

18 Q. You accomplished this change by writing a script that would
19 alter the data in the Rightscorp database, right?

20 A. Oh, that is absolutely false, sir.

21 Q. Are you familiar with a procedure called *"re-evaluate full*
22 *files being zero"*?

23 A. Uh-huh.

24 Q. That's something you wrote, right?

25 A. Please show it to me, sir.

1 Q. Well, is it something you wrote?

2 A. *"Re-evaluate full files being zero."* It did not change the
3 bit field results, to my knowledge.

4 Q. I'm asking, did you write that piece of code?

5 A. I probably -- if it's from us, I wrote it.

6 Q. And you're saying that you don't remember what that did,
7 sitting here today?

8 A. Not this many years ago. Not -- and not to the effect
9 where it would change the bit fields. It would just apply it
10 10 percent.

11 Q. I didn't ask you whether it changed the bit fields. My
12 question was, you accomplished this change by writing a script
13 that would alter the data in the Rightscorp database, right?

14 A. I don't believe it altered the data. Did it? Show me.

15 Q. Sir, this is your testimony. Do you remember whether it
16 did that or not?

17 A. I don't recall it altering the data.

18 Q. So let's go at this a different way. How did you lower the
19 threshold from 100 to ten?

20 A. Without looking at the code, I cannot recall how we lowered
21 it at that point in time.

22 Q. So you magically do not remember during this trial, is that
23 right?

24 MR. O'BEIRNE: Objection, Your Honor.

25 THE COURT: Sustained. It's argumentative.

1 BY MR. BROPHY:

2 Q. Is there a flag in the Rightscorp system that keeps track
3 of whether an individual IP address has a certain song or not?

4 A. A flag, sir?

5 Q. The full file flag.

6 A. That would be a full file bit field flag that indicated
7 that the bit field was a full file.

8 Q. And the Rightscorp system was configured to send an e-mail
9 to someone -- let me say that differently.

10 The Rightscorp system was configured to send out an e-mail
11 accusation if that full file flag was one, right?

12 A. In 2014? 2015? Let me see my code, sir. Without looking
13 at my code that was written many years ago, I do not know right
14 offhand the -- at what point things were decided to do what
15 action. I don't have the visual of my code in front of me to
16 confirm that with you. But if -- I wish I could help you with
17 that answer.

18 Q. So you're sitting here -- you're telling me that you're
19 sitting here today and you don't remember whether there is a
20 flag within your system that keeps track of whether
21 Rightscorp's going to send a notice to that individual IP
22 address or not?

23 A. I'm telling you to -- that if I -- I just remember
24 there's -- that there should be a flag, but what -- how it's
25 acted upon, I do not know that without looking at my code.

1 Q. So let's back up and try this a different way. Do you
2 remember there being a full file flag? Is that a phrase that
3 is reminiscent of anything to you?

4 A. Yeah, I recall there being a full file flag, sir.

5 Q. And what is your recollection of what the full file flag
6 does?

7 A. A full file flag would indicate that the system had gone
8 out and gotten a full bit field back from the connection.

9 Q. And so the system would save a one in the database if it
10 indicated that the computer had the song, right?

11 A. It would save a one in the database if the computer --
12 well, hold it. There are multiple tables that can have the
13 words "full file" in them. Which table are we looking at, sir?

14 Q. I'm asking about the full file flag and whether it's your
15 understanding, as the chief technology officer and the
16 programmer of the software, that that full file flag dictates
17 whether the Rightscorp system sends an e-mail to a certain IP
18 address about a certain song or not.

19 A. And I'm asking you which table of the full file we are
20 talking about, sir?

21 Q. We're going around in circles.

22 A. You're asking me a specific question. I don't know if
23 we're talking about the same table or not, sir. And with the
24 same code.

25 Q. Will you agree with me that regardless of what the file

1 names are and the flags are, when you instituted the 10 percent
2 bit field change, you modified something in the system, is that
3 right?

4 A. We -- yeah, something was filtered differently in the
5 system.

6 Q. And as a result of that, I think we've already established
7 Rightscorp would send more notices than it otherwise would,
8 right?

9 A. Well, yeah, we have established that.

10 MR. BROPHY: Let me have one minute, Your Honor.

11 THE COURT: Of course.

12 MR. BROPHY: Thank you.

13 BY MR. BROPHY:

14 Q. I want to go back to that script that I mentioned,
15 *"re-evaluate full files being zero."* Do you remember that
16 script?

17 A. Do I have a visual snapshot of that script on my mind with
18 the lines of code?

19 Q. That's not my question. Just do you remember generally
20 that that existed?

21 A. Yes.

22 Q. And I believe your testimony was that you wrote that, is
23 that right?

24 A. Yes.

25 Q. Okay. Your testimony is just that you don't remember today

1 what that actually does, is that right?

2 A. I don't remember the code inside of it.

3 Q. You have no recollection of what the purpose for that piece
4 of code was?

5 A. That's a different question.

6 Q. Okay. What was the purpose of that piece of code?

7 A. If we're talking about the same piece of code, that purpose
8 is to lower the threshold to the 10 percent bit field.

9 Q. And how did it go about doing that?

10 A. Again, now you're asking me, sir, to go through my code.

11 Q. So sitting here today, you don't remember how that program
12 caused the 10 percent bit field change to come into being?

13 A. Sir, this is, what, eight years later? I don't have a
14 visual of that code in my mind.

15 Q. Since that eight years ago, have you spoken with anyone
16 about your implementation of the 10 percent bit field rule?

17 A. No.

18 Q. No?

19 A. Well, anyone in what category, sir?

20 Q. Are you aware of the fact that the plaintiffs have hired an
21 expert in this case?

22 A. I assume the plaintiff has hired an expert.

23 Q. You assume or do you know?

24 A. I don't know who the expert is, sir.

25 Q. You don't know who the expert is who's going to be

1 testifying in this case --

2 A. Oh, I'm sorry. I thought the -- I thought you were talking
3 about the defendant. Yes, I do know that the plaintiff has
4 hired an expert.

5 Q. Who is that expert?

6 A. Barb Frederiksen.

7 Q. And you've had a conversation with her, right?

8 A. I've had multiple conversations with her.

9 Q. Including about this 10 percent bit field threshold, right?

10 A. In the Cox case, yes.

11 Q. In this case?

12 A. No.

13 Q. So you have not had conversations with Barbara
14 Frederiksen-Cross about the 10 percent bit field rule in this
15 case? Is that your testimony?

16 A. To the best of my knowledge, I have not.

17 Q. So that procedure, the *"re-evaluate full files being zero,"*
18 *"re-evaluate full files being zero,"* that's a SQL piece of
19 code, right?

20 A. To my recollection, yes, it is.

21 Q. Does the Rightscorp system keep track of changes to the SQL
22 database -- let me do that differently.

23 There's such a thing as the Rightscorp database, right?

24 A. There are databases in Rightscorp, yes.

25 Q. Are those SQL databases?

1 A. Yes, they are.

2 Q. Would you mind just helping the jury understand what a SQL
3 database is, briefly?

4 A. A SQL database. Well, a standard database based off the
5 IBM database model from the '70s and '80s. This is a -- in
6 this case we're either running MySQL or MariaDB. It is a
7 relational database model and it runs off SQL-97 in maybe 2002
8 is the language for communication.

9 Q. And does the Rightscorp organization keep track of changes
10 to its SQL databases?

11 A. The SQL databases -- as data comes in, the database tables
12 change.

13 Q. Does Rightscorp keep track of what changes are made over
14 time?

15 A. As the data comes into the system, sir, data is augmented
16 in. It's memorialized in the tables.

17 Q. Let me go about this a different way. Is there any record
18 within Rightscorp of how or whether the *"re-evaluate full files
19 being zero"* script was changed over time?

20 A. I believe I testified that in the Cox case, and beyond that
21 since -- there has been no change to my knowledge.

22 Q. That's not my question. Does Rightscorp keep track of
23 changes such that it can tell whether there have been changes
24 to that piece of code over time?

25 A. No, we do not.

1 Q. So there's no way for us to know sitting here today whether
2 at some point that *"re-evaluate full files being zero"* script
3 didn't change it to 5 percent and to the 10 percent threshold,
4 right?

5 A. Except for my testimony.

6 Q. And it could have been zero percent, right?

7 A. Well, that would be interesting. But, yeah, it could have
8 been, except for my -- except for my testimony.

9 Q. So the only way we know what the thresholds were over time
10 at Rightscorp is by asking you, right?

11 A. That is correct.

12 Q. Except for the very few instances in which Rightscorp
13 printed out the code for the Rightscorp -- for the procedure,
14 right?

15 A. That's correct.

16 Q. Obviously, if you print out the code, you'd have a
17 memorialization of what it was doing in that snapshot of time,
18 right?

19 A. That would -- yes, that would be true.

20 Q. And those pieces of code were printed out for purposes of
21 litigation, right?

22 A. I don't have an idea when each piece of code was printed
23 out. Some prior to litigation, some after litigation.

24 Q. So you do recall printing out that procedure over time?

25 A. I recall transmitting that procedure. I do not recall if

1 it was ever printed out on paper.

2 Q. Maybe I should use a different word. You recall extracting
3 that code from the database and sending it to someone, right?

4 A. I recall sending a database dump of information to someone,
5 yes.

6 Q. Who do you recall sending that information to?

7 A. At what point in time, sir?

8 Q. At any time.

9 MR. O'BEIRNE: Your Honor, I would object in part to
10 the relevance. He's already testified he provided coding in
11 another litigation, and I think we're getting two litigations
12 confused. I'm not sure --

13 THE COURT: Well, it is important that we keep the two
14 litigations separate.

15 Are you trying to impeach him with this?

16 MR. BROPHY: Your Honor, I'm trying to establish that
17 there's no clear record of how that piece of code operated over
18 time, and I believe --

19 THE COURT: You can continue --

20 MR. BROPHY: Thank you, Your Honor.

21 THE COURT: -- as long as you make sure that we
22 understand, the jury understands that you're talking about a
23 different case.

24 MR. BROPHY: Thank you, Your Honor.

25 BY MR. BROPHY:

1 Q. Do you have any recollection of an individual instance,
2 Mr. Boswell -- are you okay? Did you need a minute?

3 A. My breakfast burrito is catching up with me.

4 Q. Feel free to take a sip of water.

5 (Pause.)

6 Do you have a recollection of a particular instance in
7 which you pulled this particular code out of the SQL database
8 and sent it to someone?

9 A. Do I have a date and time? No, I do not.

10 Q. Not a date and time, just a particular recollection of
11 having done it.

12 A. I've done it a few times, so it has been done more than
13 once.

14 Q. In the few times that you recall doing it, do you remember
15 who you were sending it to?

16 A. I believe I sent this to counsel.

17 Q. And so in those instances, you went into the database and
18 pulled this source code out and produced it for purposes of the
19 lawsuit, right?

20 A. In a prior case, we did that more than a few times, yes.

21 Q. Did you do it for this case, do you remember?

22 A. Don't recall how many times.

23 Q. So other than those moments when you knew there was going
24 to be a litigation and you went in and pulled the code out,
25 reflecting it did a certain thing on that day, other than those

1 instances, we don't know how that *"re-evaluate full files being*
2 *zero"* operated, right?

3 A. Well, that is an interesting question. I'm not quite sure
4 what you mean by that, sir.

5 Q. Well, you've already testified that Rightscorp doesn't have
6 a change management system for a SQL database, right?

7 A. That is correct.

8 Q. And as a result of that, you can go in and change that
9 script every day to do different things, and there's no record
10 of that, right?

11 A. There would be no record of that.

12 Q. So the only way we know about how the Rightstcorp system
13 was running that procedure is to talk to you, right?

14 A. That is correct.

15 Q. And you don't even remember what that procedure does,
16 sitting here today, right?

17 A. Which would indicate I probably don't mess with that
18 procedure.

19 Q. Well, as a result of that, no one in this room is going to
20 have an understanding at any point about whether that threshold
21 was 10 percent, 20 percent, 5 percent or zero percent on any
22 given day, other than when there were printouts or extractions;
23 is that right?

24 A. Sir, I've testified it's a hundred percent at this point in
25 time, and at the time this data was pulled from this system.

1 Q. So we have to rely on your testimony to know how that
2 threshold works, right?

3 A. You have to rely on that -- my testimony to tell you that
4 we are running at a hundred percent bit field or a hundred
5 percent of the payload in that torrent file; not necessarily
6 the torrent file, but the hundred percent of the payload in
7 that torrent file when we sent the notices.

8 Q. And we have to rely on you for that, right?

9 A. That -- that is the truth.

10 Q. And you alone, right?

11 A. Me alone.

12 Q. Now, for the same reason that Rightscorp doesn't keep a
13 change management log for its SQL database, we also don't know
14 what other scripts have come and gone in that period, right?

15 A. Such as, sir?

16 Q. Well, you could write a script that says send a bunch of
17 notices regardless of full file .text, and send that out and
18 have Rightscorp send out notices, and we wouldn't know it ever
19 existed, right?

20 A. First, that's a fascinating fallacy, but, no, that wouldn't
21 happen and --

22 Q. And you need -- go ahead.

23 A. That wouldn't happen, and it just would be of no value of
24 me to do that, to write a script that would tell Rightscorp to
25 go out and just populate the world with notices.

1 Q. Well, the value to you would be that more notices would be
2 sent with more links to pay money, right?

3 A. There's no value in falsifying notices, sir.

4 Q. There's value in having people click on those links and pay
5 Rightscorp money, isn't there?

6 A. Again, sir, there's no value in falsifying notices.

7 Q. The bottom line is we don't know what other scripts you may
8 have written over time because there's no logs of when those
9 scripts came into being or when they disappeared, right?

10 A. There's non-production code that takes place all the time
11 in the process of doing other things.

12 Q. And therefore, it's possible that you wrote other scripts
13 to manipulate the Rightscorp data and there's no record of it,
14 right?

15 A. Sir, why would I do that? It is of no value to me as an
16 engineer.

17 THE COURT: Okay. Let's not get into an argument
18 between you two.

19 BY MR. BROPHY:

20 Q. I'm just asking whether it's possible, sir?

21 A. It is highly unlikely, sir.

22 Q. But it's possible, right?

23 A. It's not possible.

24 Q. It's not possible?

25 A. I would not do such a thing.

1 Q. Setting that aside for a moment, is it possible?

2 A. Is it possible that there is a script that was written at
3 some point in time that -- yeah, there's always a possibility
4 of a script.

5 Q. So having run this procedure to limit the threshold --

6 A. Uh-huh.

7 Q. -- the system would send an e-mail accusing the associated
8 computer affected by that change a notice, right?

9 A. For that period of time, when lazy bit-fielding was
10 popular, we would use that 10 percent threshold and send a
11 notice.

12 Q. And the system would not have sent that notice had you not
13 changed the threshold, right?

14 A. In the cases where the notice was less than a hundred
15 percent, we would not have done that, yes, we have not --
16 whether a hundred percent, we would still have sent the notice.

17 Q. You've already testified here the procedure to alter the
18 Rightscorp data was only active for a few weeks in November of
19 2014, right?

20 A. It's my testimony.

21 MR. O'BEIRNE: Objection to the statement "alter the
22 data."

23 THE COURT: Sustained.

24 BY MR. BROPHY:

25 Q. You said this is just a quick experiment, right?

1 A. It was.

2 Q. You've said this procedure stopped running in December of
3 2014, right?

4 A. If that's my testimony, yes.

5 Q. Is that your testimony or not?

6 A. Sir, this was a long time ago when I testified to this.

7 Q. Do you have the materials from yesterday that were up there
8 for you?

9 A. I have --

10 Q. I'm particularly interested in the August 2018 transcript.

11 A. August 8, 2018?

12 Q. Yes.

13 A. Yes.

14 MR. BROPHY: Counsel, do you still have a copy?

15 MR. O'BEIRNE: I do. What are we looking at?

16 MR. BROPHY: I'd like to direct the Court's attention
17 to page 263, line 7 through 11.

18 MR. O'BEIRNE: Are you going to refresh his
19 recollection?

20 BY MR. BROPHY:

21 Q. So Mr. Boswell, would you mind looking at page 263, lines 7
22 through 11. Do you see those there?

23 A. Yes.

24 Q. Does that refresh your recollection about when you
25 testified that the 10 percent bit-field threshold was turned

1 off?

2 A. Yes, it does refresh my recollection. Thank you very much.

3 Q. And according to your testimony in this deposition, when
4 was it turned off? You just have to look at those lines that I
5 identified to you, 7 through 11.

6 A. Seven through 11. December. By December.

7 Q. Of which year?

8 A. 2014.

9 Q. December of 2014.

10 So your testimony today in total is that there was a
11 10 percent bit-field threshold change that you put in for a
12 couple of weeks that was an experiment, and that it was off by
13 December of 2014, correct?

14 A. Yeah.

15 Q. And after it was turned off in December of 2014, what was
16 the threshold set to, according to you?

17 A. A hundred percent.

18 Q. A hundred percent. So from December 2014 on, your
19 testimony here today is that bit field has been at a hundred
20 percent?

21 A. Yes.

22 MR. BROPHY: May I approach, Your Honor?

23 THE COURT: Sure.

24 MR. BROPHY: Thank you. I'd like to direct the
25 Court's attention to -- let me back up.

1 BY MR. BROPHY:

2 Q. Mr. Boswell, do you remember giving deposition testimony on
3 Friday, July 3rd, 2015, in a matter related to the Rightscorp
4 system?

5 A. 2015?

6 Q. Los Angeles, California.

7 MR. O'BEIRNE: Your Honor, there's been no additional
8 testimony, so I'm not sure what we're using this for. There's
9 been no answer on the record to confront him with.

10 MR. BROPHY: Your Honor, he's already testified about
11 the time periods during which the bit field was set to
12 10 percent, and this is impeaching him on that issue.

13 THE COURT: You can continue.

14 MR. O'BEIRNE: What page, counsel?

15 MR. BROPHY: Well, I'm waiting to hear.

16 THE WITNESS: I recall being -- yes.

17 BY MR. BROPHY:

18 Q. All right. I'd like to direct the Court's attention to
19 page 63 of the deposition transcript for that deposition, lines
20 11 through 17.

21 A. Page 63?

22 Q. Yes, sir.

23 A. Okay.

24 Q. In that deposition, the attorney asked you: *"So Rightscorp*
25 *determines whether there is present on a computer a minimum of*

1 *10 percent of a payload in order to determine whether there is*
2 *an infringement occurring at the computer on the other side of*
3 *that handshake; is that correct?"*

4 And you answer --

5 A. Sir, I grabbed the wrong page. What's the page, again,
6 sir?

7 Q. So I'm on page 63, lines 11 through 17. Are you there?

8 A. Uh-huh.

9 Q. So the attorney asked you, the question: "*So Rightscorp*
10 *determines whether there is present on a computer a minimum of*
11 *10 percent of a payload in order to determine whether there is*
12 *an infringement occurring at the computer on the other side of*
13 *that handshake; is that correct?"*

14 And you answer: "*As of 2015, yes.*"

15 A. Uh-huh.

16 Q. So your testimony before this was that it was off by
17 December of 2014. And in this transcript, you're indicating it
18 was on as of 2015, right?

19 A. December 2014 and January 2015 are roughly the same time
20 period, sir.

21 Q. Let's turn to page 170 of the same transcript, please. I'd
22 like to direct the Court's attention to page 170, line 21,
23 through page 171, line 3.

24 The attorney asked you: "*And does it apply that 10 percent*
25 *threshold to specific parts of the bit field to look for values*

1 *in specific parts, or does it look for particular values across*
2 *the entire bit field in determining whether it indicates likely*
3 *infringement?"*

4 And your answer is: *"Since 2015, it only looks at*
5 *10 percent across the board."*

6 Since 2015.

7 A. Sir, obviously --

8 Q. Well, let me ask the question. In this case, you've
9 testified that this was only on for a couple weeks as an
10 experiment in November 2014, right?

11 A. Uh-huh.

12 Q. And this deposition you're saying it was turned to the
13 10 percent bit field since 2015, right?

14 A. Well, sir, obviously, I misspoke the year at that point in
15 time.

16 Q. Well, sir, this is years ago when you were closer to the
17 facts, right?

18 A. And prior to that, since 2015, I indicated it was off in
19 2015. At page 71, it indicates it was off by 2015.

20 Q. So when you gave this deposition -- this was July 3rd of
21 2015, right? You can look at the front cover if you need to.

22 A. Okay.

23 Q. And in July of 2015, your answer was, *"Since 2015, it only*
24 *looks at 10 percent across the board."* Right?

25 A. Sir, obviously, I misspoke the year.

1 Q. So this is eight months after the period that you claim the
2 10 percent bit field was turned off, right?

3 A. Yes.

4 Q. November 2014, July 2015; 8 months later?

5 A. Uh-huh.

6 Q. And your testimony is it's at 10 percent, in this
7 deposition, right?

8 A. Sir, at that point in time, I had said prior to that
9 question that it was off by 2015. If I had said, "Since 2015,"
10 it was a slip of the tongue at that deposition.

11 Q. You changed your testimony in this case to try to downplay
12 the impact of your manipulation of the Rightscorp database,
13 didn't you?

14 A. Sir, the exact date and time of the 10 percent bit field
15 over the one-month period of time during 2014/2015 has nothing
16 to do -- it's come and gone.

17 Q. Because Rightscorp doesn't keep track of how its SQL
18 scripts are changed over time, there is no way to know when the
19 bit field 10 percent rule was turned off, isn't that right?

20 A. I have told you it's been turned off, and that you'll have
21 to do -- you'll have to accept.

22 Q. Is there any way for us to look at the Rightscorp system
23 and determine when the 10 percent bit field rule was turned
24 off?

25 A. I can't re -- I can't think of any at this moment while

1 sitting here.

2 Q. Do you have a copy of your deposition transcript from this
3 case from June of 2019 in front of you? June 26, 2019?

4 A. June 26, yes, I do.

5 MR. BROPHY: I'd like to direct the Court's attention
6 to page 517 of that transcript, lines 9 through 15.

7 BY MR. BROPHY:

8 Q. I asked you, *"Why can we not use similar evidence to*
9 *determine when the 10 percent bit field stopped being used?"*

10 And you answered me --

11 MR. O'BEIRNE: Your Honor, I object. This isn't
12 inconsistent. This is perfectly consistent with the testimony
13 he just gave. It's not impeachment.

14 MR. BROPHY: Your Honor, he said he doesn't remember,
15 and in this statement, he does remember.

16 THE COURT: We'll let the jury sort it out.

17 BY MR. BROPHY:

18 Q. I asked the question, *"Why can we not use similar evidence*
19 *to determine when the 10 percent bit field stopped being used?"*

20 And your answer was, *"I would have -- there's no end event.*
21 *There's no end event to remove an event. There's no negative*
22 *that you can prove, so there's no evidence to when it was*
23 *stopped being used."*

24 Do you see that?

25 A. I do see that.

1 Q. There is no evidence of when that 10 percent bit field
2 threshold stopped being used; isn't that right?

3 A. Well, sir, as you know, you can't prove a negative. Except
4 for the fact that I testified that it stopped being used.

5 Q. You testified?

6 A. Yes, I did.

7 Q. You testified it's 10 percent.

8 A. I've testified it stopped being used.

9 Q. You testified it's 10 percent, right?

10 A. I testified we no longer use the 10 percent, sir.

11 Q. And you testified that it was off in November -- December
12 of 2014, right? At least one time?

13 A. Well, sir, December of 2014 and January of 2015 are
14 relatively close dates.

15 Q. There's also no way of knowing how many Rightscorp e-mails
16 are infected with these manipulations; isn't that right?

17 MR. O'BEIRNE: Objection, Your Honor. "infected with
18 the manipulations."

19 THE COURT: Sustained.

20 BY MR. BROPHY:

21 Q. There is no way of knowing how many Rightscorp's e-mails
22 are impacted by this; isn't that right?

23 A. You will be able to check because of the -- from the time
24 stamp, roughly speaking, of that period in time, so...

25 Q. Well, we don't know what time it was running or not, other

1 than your testimony, right?

2 A. We know the time it was running based off my testimony,
3 yes, sir.

4 Q. And one time you said it was in November of 2014 for a
5 couple of weeks as an experiment, right?

6 A. November to December.

7 Q. That's in this case?

8 A. Uh-huh.

9 Q. Right? So that's a real small piece of time to downplay
10 the significance of it, right?

11 A. Sir, I've already asked and answered this. This is a small
12 period of time that we are running this -- this 10 percent bit
13 field.

14 Q. And previously you testified it was on for at least seven,
15 eight months, right?

16 A. I don't recall testifying to that.

17 MR. O'BEIRNE: Objection, misstates testimony.

18 THE COURT: Objection sustained.

19 BY MR. BROPHY:

20 Q. You testified in July of 2015 that it was doing a
21 10 percent bit field, right? Do I need to read the deposition
22 testimony again?

23 MR. O'BEIRNE: Your Honor, I think this has been asked
24 and answered and his answers are clear.

25 THE COURT: I do too. The objection is sustained.

1 BY MR. BROPHY:

2 Q. So there is no way for anyone in this courtroom to know how
3 many e-mails Rightscorp sent that are impacted by this issue;
4 isn't that right?

5 MR. O'BEIRNE: It's been asked and answered.

6 MR. BROPHY: Your Honor, I didn't get an answer to
7 that question.

8 THE COURT: Objection is overruled.

9 A. You would look at the e-mails that were sent during that
10 time period and assume that there was influence during that
11 time period.

12 Q. Would you please take a look at the June 26, 2019
13 transcript that you have in front of you.

14 MR. BROPHY: And I'll direct the Court's attention to
15 page 464, lines one through nine.

16 BY MR. BROPHY:

17 Q. Let me know when you're there.

18 A. 454?

19 Q. 464, lines one through nine.

20 A. Yes.

21 Q. I asked the question, *"And can you tell me how many of the*
22 *bit field flags that were ultimately set were impacted by the*
23 *10 percent bit field test?"*

24 And you answered, *"During that period of time, no, I can't*
25 *tell you."*

1 I asked, *"Somewhere, right?"*

2 You said, *"Obviously, yes."*

3 And I asked, *"But you have no idea how many?"*

4 And your answer was, *"No."*

5 See that?

6 A. Yes. And now I've told you that during that period of
7 time, if you look for the e-mails that went out the door, you
8 can assume that some of those, during that period of time, were
9 affected. But at that moment in time, I didn't look at it in
10 that model. I didn't look at checking the e-mails and saying,
11 well, okay, during this period of time when the 10 percent
12 e-mails are going out the door, there's a potential of those
13 group of e-mails being affected.

14 Q. And in this case you've testified that that period of time
15 was this couple weeks in November of 2014, right?

16 A. The best of my knowledge, it was.

17 Q. And previously you testified otherwise, didn't you?

18 MR. O'BEIRNE: Objection, Your Honor.

19 MR. BROPHY: I don't have any further questions, Your
20 Honor.

21 THE COURT: All right. Is this a good time for our
22 morning recess?

23 MR. O'BEIRNE: I think so, Judge.

24 THE COURT: Then you can do your redirect and finish
25 with this witness.

1 COURT SECURITY OFFICER: All rise for the jury.

2 *(10:08 a.m., the jury exits the courtroom.)*

3 * * *

4 *(10:27 a.m.)*

5 COURT SECURITY OFFICER: All rise. Please rise for
6 the jury.

7 THE COURT: Okay. Please be seated.

8 Okay, counsel, redirect.

9 REDIRECT EXAMINATION

10 BY MR. O'BEIRNE:

11 Q. Good morning, Mr. Boswell.

12 A. Good morning.

13 Q. I'd like to ask you some questions about some topics that
14 counsel for Grande covered on cross-examination. I wanted to
15 start with this discussion that we just had at the end about a
16 time period where there was 10 percent bit field matching. Do
17 you recall that?

18 A. Oh, yes.

19 Q. Before we talk about the 10 percent, I want to ask you, did
20 Rightscorp ever send a notice without confirming a hash match
21 with a known infringing torrent file being offered to share?

22 A. No.

23 Q. Did Rightscorp ever send a notice without the person on the
24 other side of the handshake confirming they had bit fields from
25 a known torrent file confirmed by hash value?

1 A. Never.

2 Q. In your view, even when you were sending notices, based on
3 confirming 10 percent of a torrent file, were those notices
4 accurate?

5 MR. BROPHY: Objection. Calls for speculation.

6 THE COURT: Sustained.

7 BY MR. O'BEIRNE:

8 Q. In your belief, was the data you were reporting, even at
9 confirming 10 percent of a torrent file, accurate about what
10 that user was offering to share?

11 MR. BROPHY: Objection. Calls for speculation.

12 THE COURT: That's kind of on the border. Why don't
13 you rephrase it a little bit.

14 BY MR. O'BEIRNE:

15 Q. Mr. Boswell, do you believe every notice that Rightscorp
16 ever sent was accurate and reliable?

17 A. Yes, I do.

18 MR. BROPHY: Objection. Nevermind.

19 THE COURT: Okay. You answered the question.

20 MR. O'BEIRNE: I'm just asking him --

21 THE COURT: No, he's already answered. That's fine.

22 BY MR. O'BEIRNE:

23 Q. Even at the 10 percent threshold?

24 A. Yes, I do.

25 Q. Let's talk about that for a moment. Could you please

1 explain to the jury the rationale and the timing of
2 experimenting with the 10 percent threshold, please?

3 A. During that time, the peer-to-peer community, the
4 BitTorrent community, was noticing that there was a potential
5 for the ISPs to be monitoring their traffic. So they felt that
6 they would go through a model called "lazy bit-fielding" where
7 they would share some of their bit field packets so that the
8 ISPs who are -- they felt were watching them would not see that
9 they had the full bit field. Lazy bit-fielding I don't believe
10 is being used anymore, but that period of time, that's what the
11 peer-to-peer software was working with.

12 Q. And I think you just described it. By lazy bit field, do
13 you mean that in a handshake, the user would be reporting only
14 having some of the bit fields when, in reality, they had more?

15 A. Yeah, that's correct.

16 Q. Was that part of the reason why Rightscorp experimented
17 with detection at a 10 percent bit-field threshold?

18 MR. BROPHY: Objection. Calls for speculation, also
19 lacks foundation.

20 MR. O'BEIRNE: I asked him what Rightscorp was doing.

21 THE COURT: Overruled.

22 A. Yeah, that was part of the reason. And the lazy
23 bit-fielding, again, didn't last very long in the pirate
24 industry.

25 Q. Was there another reason, based on the interest of your

1 clients that caused you to experiment with a 10 percent
2 threshold?

3 A. We did have some clients in the movie industry, and we had
4 Warner Brothers Movies, and their files are massive and they
5 felt that 10 percent of a massive movie file was enough.

6 Q. So at the request of your clients, including Warner
7 Brothers Studios, the movie studio, you experimented with
8 running the notification system at a 10 percent level, is that
9 fair?

10 A. That was part of the conversation, yes.

11 Q. Prior to that, did your code have in place the instructions
12 to only generate a notice at a hundred percent bit field?

13 A. That is correct.

14 Q. Has that code ever been removed from your system?

15 A. Removed in --?

16 Q. Taken out.

17 A. Yeah.

18 Q. Does it remain in the system today, the hundred-percent
19 threshold?

20 A. The hundred-percent threshold remains in the system today.

21 Q. And has it been there throughout the entire time?

22 A. Yes, it has.

23 Q. Okay. I think Mr. Brophy was talking about SQL scripts or
24 other ways in which you attempted to try this 10 percent bit
25 field. Was that a replacement in the code or was that

1 something that was put on top for a period?

2 A. That was a filtering mechanism, so it was on top.

3 Q. And who implemented that filtering mechanism?

4 A. I did.

5 Q. How confident are you that that filtering mechanism was
6 only in place for a short period of time?

7 A. Very confident.

8 Q. And I believe you've been shown testimony from these
9 previous cases -- maybe it started November 2014, ended in
10 December '14 or maybe January 2015. Does that prior testimony
11 question in your mind the amount of time it was in place?

12 A. Very short period of time, over the grand scheme of 13
13 years.

14 Q. Sitting here today, are you still confident it was a matter
15 of weeks?

16 A. I am.

17 Q. Are you confident that you were sending notices only on a
18 hundred-percent bit field matching in 2015 after the --

19 MR. BROPHY: Objection. Leading questions.

20 THE COURT: I'm sorry. I got a bounce-back. What was
21 your objection?

22 MR. BROPHY: These are leading questions.

23 THE COURT: They are.

24 BY MR. O'BEIRNE:

25 Q. For how long after the patch was removed was Rightscorp

1 sending notices only at 100 percent?

2 A. So we're looking at 220, so we since -- since roughly the
3 2015 -- January/December 2014 until now.

4 Q. On cross-examination, counsel asked you some questions and
5 actually showed you some testimony from a prior litigation, BMG
6 versus Cox. Do you recall that?

7 A. Yes.

8 Q. He mentioned that it was other litigation involving
9 Rightscorp. Just to be clear, was Rightscorp a defendant in
10 that case?

11 A. No.

12 Q. Was Rightscorp providing data in support of the plaintiffs
13 in that case?

14 A. Yes.

15 Q. Against Cox, the ISP?

16 MR. BROPHY: Objection, Your Honor. It's a violation
17 of the motion in limine order.

18 THE COURT: Yes, I think so.

19 MR. O'BEIRNE: Your Honor, we had questioning and
20 confrontation about substantial testimony from that matter,
21 including whether code was provided and reviewed at any time.
22 I think it's only fair that I give the witness the opportunity
23 to explain the context of the prior production of code, where
24 it was given. And there were questions about whether it's been
25 audited, so the involvement of his code in the prior

1 litigation, testimony from which he was confronted with seems
2 only fair, given the cross-examination.

3 MR. BROPHY: Your Honor, may we have a sidebar on this
4 issue?

5 THE COURT: All right.

6 * * *

7 *(10:35 a.m., sidebar.)*

8 MR. O'BEIRNE: Your Honor, Mr. Boswell was asked --

9 THE COURT: Well, I know what you're going to argue.
10 What's your argument?

11 MR. BROPHY: Your Honor, the testimony that I elicited
12 from the witness --

13 THE COURT: I don't think she can hear you.

14 MR. BROPHY: The testimony that we elicited from the
15 witness was only related to the operation of the Rightscorp
16 system. It had nothing to do with what happened in that case,
17 what the outcome of that case was or what the evidence was
18 being used for in that case.

19 THE COURT: There isn't going to be any evidence
20 adduced in this case about what the result was in that case,
21 what the outcome of that case was, how much was awarded in
22 damages, nothing like that.

23 MR. O'BEIRNE: Two points, Judge. We're certainly not
24 looking to elicit the amount that was awarded. Your Honor's --

25 THE COURT: Even the outcome.

1 MR. O'BEIRNE: Your Honor has ruled in the motion in
2 limine on exactly this issue that we may absolutely introduce
3 evidence as to the outcome.

4 MR. GILMORE: Here is the ruling, Your Honor.

5 MR. BROPHY: Well, here is the ruling, Your Honor.

6 THE COURT: I don't know what to look at here.

7 MR. GILMORE: There's two MILs that are relevant.

8 THE COURT: Just a minute. Let me read.

9 (Pause.)

10 It seems to me like what I'm talking about is exactly
11 the way I ruled. The Court shall grant the motion. It says,
12 *"Plaintiffs seemingly agree, noting that they do not intend to*
13 *discuss the findings of fact or conclusions of law in the Cox*
14 *trial nor do plaintiffs intend to introduce the verdict form,*
15 *judgment, evidence or testimony presented."*

16 That's the way I ruled, and that's what I just said.

17 MR. O'BEIRNE: Right, Judge, but you may recall there
18 were competing motions in limine. In responding to this motion
19 in limine, we indicated what we were not attempting to offer,
20 but sought permission from Your Honor to offer this specific
21 limited testimony, which you separately ruled. It's the next
22 page of the document, Your Honor, starting --

23 THE COURT: Where?

24 MR. O'BEIRNE: -- motion number eight.

25 (Pause.)

1 THE COURT: Well, this is why you should read it in
2 context. I said, *"The Court grants the motion, but the Court*
3 *will allow Plaintiff to present limited evidence as discussed*
4 *in their response subject to re-raising this at trial."*

5 I am not going to allow any testimony of any verdict,
6 period, because I think that is highly prejudicial and not
7 probative.

8 MR. BART: Your Honor, there is going to be evidence
9 in this case that Grande --

10 THE COURT: She's not getting --

11 THE COURT REPORTER: That's it.

12 THE COURT: Okay?

13 THE COURT REPORTER: Yes.

14 MR. BART: There is going to be evidence in this case
15 from Grande's own files that they were following it, that they
16 reacted to the decision in the case and that their own behavior
17 was affected by them following it and knowing that Cox lost
18 that case. That's all in Rightscorp notices, that's all that
19 we're interested in, in introducing --

20 THE COURT: That's fine, but I don't want the verdict.

21 MR. BART: Just who won, not the verdict. We're not
22 going to talk about the number.

23 THE COURT: When you say about who won, I think you
24 put it the correct way, that they reacted to the result in the
25 Cox case. That's all that needs to be brought in. Period. I

1 don't want -- I wasn't at the Cox case. I don't know what the
2 evidence was there. I have no idea who the witnesses were, the
3 strength of that evidence. I don't want this jury to find an
4 easy way out of this verdict by simply saying, Oh, well, they
5 were sued, Cox was sued on this same material and the jury
6 there found them responsible and, therefore, obviously, that's
7 the way we should go.

8 MR. BART: The only response to that, Your Honor --
9 and I respect that, obviously -- is that the defendant is
10 trying to create an impression that there's never been any
11 review or analysis or validation of the Rightscorp system and
12 that case was, in fact, based entirely on the Rightscorp
13 system. And to preclude --

14 THE COURT: I don't know that because I wasn't there
15 and that case isn't here. I understand that that's your view
16 of it.

17 MR. BART: But then they shouldn't be able to argue
18 that point.

19 THE COURT: I don't know what else was in that case.
20 There may be many other things. May have been the witness that
21 Cox presented was horrible and/or even if it was the same
22 witness, came across to that jury as being unbelievable. So
23 there are many, many ways to which a verdict can be reached by
24 a jury, which makes the introduction of a verdict as evidence
25 of what should happen here inappropriate.

1 MR. BART: But, Your Honor --

2 THE COURT: I do understand that you have a desire to
3 get into evidence, and I will allow that -- just like I said
4 here in my motion in limine -- the fact that they changed their
5 behavior predicated on the result in the Cox case, but that's
6 as far as it goes.

7 MR. BART: Your Honor, if the plaintiff is making an
8 allegation -- defendant is making an allegation of repeated
9 questions that there's been no validation of the Rightscorp
10 evidence --

11 THE COURT: We've already had testimony here about the
12 fact that this program was at issue in the Cox case.

13 MR. BART: Right.

14 THE COURT: That's already here. The jury has already
15 heard that.

16 MR. BART: But there was no other evidence of direct
17 infringement and evidence of direct infringement -- everything
18 you said about the verdict could easily have been --

19 THE COURT: If what you're seeking for me to do is to
20 allow the Cox verdict to come in to prove to the jury that that
21 somehow validates the Rightscorp's method, that isn't going to
22 happen in this litigation.

23 MR. O'BEIRNE: I'm trying to do something different.

24 MR. BROPHY: May I be heard for a moment?

25 MR. BART: He's ruling on your behalf.

1 MR. BROPHY: I think there's an important factual
2 point to be made here that needs to go into Your Honor's
3 consideration of this. That decision was reversed on appeal.

4 MR. BART: Having nothing to do with this. Having
5 nothing to do with this, and you know --

6 MR. O'BEIRNE: Judge, I'm not trying to get into the
7 verdict --

8 THE COURT: All right, all right. You know what...

9 *(10:43 a.m., sidebar ended.)*

10 * * *

11 Ladies and gentlemen, this is just going to be too
12 difficult for me to do at sidebar. It's aggravating for me to
13 try to have one person talking into that little dinky mike and
14 then another person talking into a little dinky mike. Not
15 happening. So I'm going to let you go early for lunch. Let me
16 just deal with this here and we'll see you back here right
17 around 1:30, okay?

18 COURT SECURITY OFFICER: All rise for the jury.

19 *(10:45 a.m., the jury exits the courtroom.)*

20 * * *

21 THE COURT: This is why I don't like sidebars. The
22 mikes are not the best, it's very difficult for the reporter,
23 the lawyers are all jammed together over in a corner and we're
24 trying to get the lawyers to be loud enough so the reporter can
25 hear, but not so loud that the jury can hear. And it is a

1 failing effort at every turn. This is why when you ask me,
2 "Can I have a sidebar?" and I'll go "No", unless it's something
3 really urgent.

4 I understand the importance of this. That's why I
5 allowed it, but it didn't work for the reasons, we just
6 discussed. Unfortunately, the people who design courtrooms are
7 not lawyers. They're architects. If they had ever asked
8 somebody that might have something to do with the courtroom, we
9 might get a better result.

10 Sir, you can step down, and you probably should step
11 outside.

12 THE WITNESS: I will. Thank you, sir.

13 * * *

14 (10:45 a.m.)

15 THE COURT: You can be seated.

16 All right. So the jury is gone. The witness is gone.
17 Let me explain something. My concern is the same in this case
18 as it has been and is, and is the concern of as many federal
19 judges as I've ever been in programs with where we've discussed
20 this, that prior litigation involving different parties -- and
21 Cox is not in this case. Now, the plaintiffs are, I think -- I
22 think you were the plaintiffs in that?

23 MR. BART: No, we were not.

24 THE COURT: You weren't even the plaintiffs in that.

25 All right. We have two totally different parties. We have, I

1 presume, different attorneys who are extrapolating what they
2 believe the evidence was. You have a different federal judge.
3 And to take that verdict and place it in the lap of the jury as
4 some evidence of the credibility of anything is of concern to
5 me.

6 Now, I do understand -- I understand the plaintiff's
7 concern, that the defendants want to show that Rightscorp is --
8 or tried to show that Rightscorp is basically, from their
9 perspective, okay, I'm not agreeing with it, all right --
10 basically a program concocted by an individual that has little
11 to no careful review or peer review, that is not a program that
12 should be considered by the jury as reliable and so forth.

13 The plaintiff's view, of course, is that it is a
14 highly sophisticated, tested program that has been used in the
15 industry for some time and that was used in the Cox litigation.
16 And since it was a verdict for the plaintiff in the Cox
17 litigation, at least in the lower court -- I guess it was
18 reversed, but for another reason.

19 MR. BROPHY: We don't agree with that, by the way.

20 THE COURT: Excuse me?

21 MR. BROPHY: We don't agree with that, by the way.

22 THE COURT: All right. Here we go. See, this is the
23 problem. Where was this case tried?

24 MR. BART: Virginia.

25 MR. BROPHY: Virginia.

1 THE COURT: Okay. That would be the Fourth Circuit,
2 correct?

3 MR. BROPHY: Yes.

4 MR. BART: Yes.

5 THE COURT: Yes. I certainly don't sit on that court.
6 I wasn't involved, so I don't know what the reason was that
7 they reversed it. I'm not going to spend my time trying to
8 retry the Cox case here. We're not going to retry it here. We
9 don't have the evidence and it's very dangerous for a judge to
10 allow specifics of a verdict in another case to come in as
11 evidence of what the verdict in this case ought to be, as much
12 as one party might like to have that done.

13 Now, there is a certain point where there's an
14 intersection between my concern on the one hand about what I've
15 just described, and fairness. I don't think the defense ought
16 to be able to denigrate the Rightscorp system as being
17 basically a sham, a moneymaker, which is basically what they
18 would like the jury to believe, on the one hand, when it has,
19 in fact, been used and apparently with some success in other
20 litigation. I don't know if it's just the Cox case or if there
21 were other cases in which it was used. I mean, there have been
22 a lot of these litigations around the country involving music
23 and file sharing and so forth. I mean, I get them all the time
24 in my court.

25 Mostly -- mostly, actually, not so much -- it's mostly

1 MPAA, motion picture -- in the studios where people are
2 rebroadcasting the fights or something in a bar without paying
3 the copyright fee and getting permission for that. So I'm
4 trying to figure a way around this that is fair to the
5 plaintiff, but also fair to the defendant.

6 Now, I am not of a mind to attempt to retry the Cox
7 case here. It's just not going to happen. We aren't equipped
8 for it, we're not set for it and we're not going to do it.
9 Even if we could do it, we're not going to do it, because it
10 just isn't the way we run trials in this country. We don't try
11 one case based upon the verdict in another case with different
12 parties and different evidence. Rightscorp wasn't the only
13 evidence in that case, I assume.

14 MR. BART: On this point, it was.

15 MR. O'BEIRNE: It's the only infringement evidence,
16 Judge.

17 THE COURT: Well, it may be, but there were others --
18 other evidence. And, look, we have human beings sitting there.
19 There are any number of reasons why juries rule one way or
20 another. You can put an expert up there on something else and
21 the jury may come away with the impression that that expert is
22 a charlatan. And if that's the case, then maybe the rest of
23 the case is also bad, and that may cook the stew. I've seen it
24 many times, not just once or twice.

25 And so I don't know why the jury ruled. And, you

1 know, I wasn't there. It may be that they came away with the
2 impression that Rightscorp was the gold standard of music
3 copyright detection, you know. I don't know. And I'll never
4 know and, quite frankly, neither will counsel, because you
5 weren't in the jury box either.

6 So how do we get around this in such a way that we
7 allow you to bring in the fact, because I do think -- and here
8 is the only way that it's relevant, okay? The only way that
9 it's relevant -- you can stay where you are, counsel. It's
10 perfectly okay.

11 The only way that it's relevant is that the Cox
12 verdict somehow caused the defendant to change their behavior.
13 Okay? And to the extent that they changed their behavior.
14 Now, they may have an explanation for that. I mean, there's an
15 easy explanation. Maybe the explanation is we don't agree with
16 it, we thought Rightscorp was horrible, but we changed our
17 behavior out of an abundance of caution. Okay? I've heard
18 that explanation too. And it can be a winning argument because
19 people do. I mean, you know, you hear about something that
20 went on down the road from where you live, some break-in or
21 something. You have no evidence that anybody is doing anything
22 to your house, but out of an abundance of caution, you put in a
23 security system. That's the way people act.

24 Now, that's for them to explain. So I'm trying to
25 divine here, if we can -- and I would like the lawyers to work

1 with me on this instead of working against me -- a way in which
2 we can get -- because that evidence is going to come in, okay?
3 Because that's only fair. It's been raised by the defense.
4 The plaintiff has the right to address it, so what I want to do
5 is get the evidence in in such a way that we don't lay before
6 the jury the impression or leave the jury with the impression
7 that the Cox verdict is somehow evidence in this case, which
8 it, in itself, is not evidence in this case and never will be.

9 But what may be evidence -- and what I am more than --
10 I think is more than appropriate is to allow in in some
11 appropriate fashion -- and I don't have a problem with people
12 saying, you know, Judge, you're flat wrong. We want to note
13 our objection. We're going to take it up to the Fifth Circuit.
14 That's okay. I believe in the appellate process, for Heaven's
15 sakes. For 30 years I've sat three to four times a year on the
16 Ninth Circuit. I believe in it. Okay? I don't have a problem
17 with people appealing. I appealed when I was a lawyer. I had
18 every one of my colleagues that I later served with reversed,
19 and I never let them forget it, too. All I can do is make the
20 best call I can, period.

21 So what I would like to do is to have you, during the
22 lunch hour, talk among yourselves and see if you can work --
23 and if you can't, I will just make the call, all right -- how
24 to bring this in in such a way that the Cox verdict, that they
25 learned about the Cox verdict, and as a result of their

1 understanding of whatever that verdict was, they changed their
2 behavior to start applying new requirements, which they did, I
3 think.

4 MR. BART: May I just add to that, it's not arguing on
5 the underlying point. I just want to have clarity on what our
6 use of this is. It's relevant both to their changes in
7 behavior and to their willful blindness, so it was all laid
8 out --

9 THE COURT: I understand. That's why I'm saying --

10 MR. BART: Okay. I understand that, too, but it's not
11 just limited to their changes.

12 THE COURT: Any time, any time -- obviously, if a
13 verdict comes in that shows that there may be liability and a
14 party doesn't investigate, they may have good reasons. Well,
15 maybe they did investigate. I don't know. I haven't heard
16 their case. They haven't put their case on yet.

17 MR. BART: No, but I was just clarifying that it's not
18 limited simply to changes in their behavior.

19 THE COURT: Oh, I understand. I mentioned willful
20 blindness here many times.

21 MR. BART: Okay. Your Honor, that's why --

22 THE COURT: I understand that and that's one of the
23 reasons -- I'm just saying the primary reason, however, isn't
24 willful blindness. It's their change of conduct.

25 MR. BART: It's both. I alluded to both in my opening

1 statement, and I just wanted that to be clear on the record.
2 We'll confirm --

3 THE COURT: And if you can't, then I will make -- you
4 know, that's my job is to make -- you know, call the balls and
5 strikes.

6 MR. BART: Right.

7 THE COURT: But if you can come up with something that
8 you can live with -- I'm not saying waive your objections. All
9 right? You can still say, Well, we think this is the best way
10 to bring it in. We still object. We don't think it should
11 come in. Or you think it should come in with the signed,
12 sealed, and delivered verdict from the Clerk's Office.

13 MR. BART: But we didn't argue --

14 THE COURT: Including the amount.

15 MR. BART: We obviously didn't argue that, and I think
16 Your Honor nailed it. Our biggest concern in terms of this is
17 they're making it a very major affirmative point that the
18 evidence has never been tested and never been vetted.

19 THE COURT: Well, I understand that and --

20 MR. BART: So I think --

21 THE COURT: But there's a --

22 MR. BART: -- to basically say that we can't refer to
23 a situation where this evidence was the sole evidence of the
24 prima facie case of the plaintiff in that case and therefore
25 has some validity in response to that argument -- if that

1 argument didn't exist, this is not a problem. Okay? But they
2 are making a big point of that, and they've already made a big
3 point of that, and I don't know how you undo that prejudice.

4 THE COURT: Well, I don't think it's prejudice, but --
5 well, of course it is. Any time anybody brings any evidence in
6 that goes to the other side, people call it, Well, it's
7 prejudicial to my case.

8 MR. BART: Well, it's prejudicial because it's
9 limiting what can be said in response to the argument to a
10 subset of all the available evidence.

11 THE COURT: And that's why I said I'm going to allow
12 you to get that evidence in in an appropriate way.

13 MR. BART: I hear you.

14 THE COURT: Okay? So you can be seated.

15 Now, let's keep something in mind, though. Let's all
16 go back -- and if I can go back, you can go back, to our
17 undergraduate days in biology or some other science that you
18 took and remember something called the scientific method?
19 Remember studying that? Okay.

20 One of the things that happens when a scientist
21 discovers something or prepares something and it is a
22 revelation is that they write their article. Now, before that
23 article gets published, it gets peer-reviewed; in other words,
24 other scientists have the opportunity to look at it, test the
25 validity of it, test the validity of the processes, and if, in

1 fact, it turns out that the results can be replicated
2 appropriately, then we get it published.

3 And we use the scientific method throughout our lives.
4 I mean, this is the process, by the way, that the CDC uses,
5 theoretically, at least, to approve vaccinations and
6 medications. They peer-review them, and they validate the
7 results.

8 A jury hearing the testimony of an expert and then
9 reaching a verdict is not what I would exactly refer to as a
10 peer-review process where the results have been replicated.
11 That would come from a university or some other institution or
12 individuals taking Rightscorp's product or somebody else's
13 product, running it through a bunch of appropriate tests, and
14 coming to the conclusion at the end that, indeed, it turns out
15 to be absolutely, unequivocally, a valid method of discovering
16 and validating copyright infringement.

17 Now, there's been a little of that, okay? Not a lot
18 of it, though.

19 MR. BART: But, Your Honor, their questions went far
20 beyond that. If it was simply a question of was it subjected
21 to scientific method review, the answer to that is no, and
22 that's as far as it goes. But the argument went considerably
23 further than that, and the argument is, there's been no
24 validation whatsoever of this. There's no support other than
25 your say-so for this. And that's a much stronger argument.

1 THE COURT: Well, I understand that. I heard the
2 testimony. I'm well aware of it. And that's why I -- because
3 if we didn't have that, I can assure you this wouldn't be
4 coming in at all.

5 MR. BART: We wouldn't be asking you to.

6 THE COURT: You might.

7 MR. BART: Maybe. Maybe that was a little
8 exaggeration.

9 MR. O'BEIRNE: There is one other argument, Judge,
10 that did also come in that's a matter of fact.

11 THE COURT: Wait, wait, wait. Please, please. You're
12 going to explode my head.

13 MR. O'BEIRNE: Whether the code was preserved at
14 various times and whether we can tell what the code was. It
15 was produced and provided in advance of, and at the time of,
16 the Cox litigation to outside counsel for both parties and
17 their experts. Barb Frederiksen, our expert, has the code from
18 that time period, and it's been reproduced in this case.

19 THE COURT: Well, we're going to get to that later,
20 and she's going to be able to testify, and I've already gone
21 over all of that. And I think we've -- I've reached the best
22 solution I could have come up with there. I can't think of
23 anything else I could have done.

24 MR. O'BEIRNE: That's a different --

25 THE COURT: Believe me. I woke up at 3:00 in the

1 morning trying to figure it out again.

2 This is awful. I feel like I'm litigating this case,
3 not you.

4 MR. O'BEIRNE: That's a totally different issue,
5 Judge.

6 THE COURT: I'm supposed to be able to go home and
7 watch TV, you know. That isn't happening in this case.

8 So look, sit down together. If you can't come to a
9 resolution, then I will simply -- I'm not faint of heart. It's
10 not that I am afraid to make a ruling. I'm more than happy to
11 make the ruling. I can make it right now, but I would rather
12 have the lawyers try to work out something. If you can't on
13 this evidence, then I will make the ruling, and we'll just --
14 people can note their objections, and we'll go on from there.
15 I'm not going to spend all week on this. We don't have much
16 left of the week as it is.

17 MR. BROPHY: May I just ask a simple question of
18 clarification, Your Honor?

19 THE COURT: Sure.

20 MR. BROPHY: We've been dealing with evidence kind of
21 as a mass, this globule. There are lots of different kinds of
22 evidence. There's some e-mails that they want to bring in
23 from -- internal e-mails from Grande. There's the fact that
24 this material was produced in this other case and litigated. I
25 want to make sure that we discretize those issues so they're

1 all given their due. And my understanding is that for purposes
2 of today, what we're trying to figure out is what can
3 Mr. Boswell say, if anything, about the audit of the Rightscorp
4 system, if you will, in that other litigation. You're not
5 asking us to figure out the entire --

6 THE COURT: I don't know about audit of it. I don't
7 think -- the erring of it, the result.

8 MR. BROPHY: Well, yes. When I was eliciting
9 testimony from him, it was about the independent review system
10 and the audit of the --

11 THE COURT: He said it was never audited.

12 MR. BROPHY: I agree. My point is just you're not
13 asking us to go back and resolve every evidentiary issue that
14 deals with all the documents they want to bring in this case --

15 THE COURT: No.

16 MR. BROPHY: We're just focused on what he can say on
17 the stand.

18 THE COURT: That would be lovely.

19 MR. BROPHY: I understand. I understand. I just want
20 to make sure we understood our charge.

21 THE COURT: The fact is I'm having lunch with Judge
22 Yeakel. Maybe I should transfer the case back to him. You
23 know, Lee, I got a proposition for you. I'm supposed to be a
24 senior judge. That means I'm supposed to be able to turn down
25 things. How about turning this one down right now. No, I'm

1 not doing that.

2 MR. BROPHY: Thank you for that clarification.

3 THE COURT: All right. No. This has nothing to do
4 with other parts of evidence or pieces of evidence, okay? So
5 just try to chat, if you will, and if you can't reach a
6 conclusion -- I'll be thinking about it during the lunch hour,
7 unfortunately, and I will just simply make a ruling. I've
8 already told you, generally speaking, what I'm thinking about,
9 okay, at sidebar, so my ruling would probably be somewhat
10 consistent with that.

11 I am going to allow the evidence in to the degree that
12 it stays away -- and I said it in my motion in limine flat out,
13 no verdict, no damages, no this, that, or the other thing. But
14 to the extent that they learned of the results of the Cox
15 litigation and changed their position as a result of that. And
16 then you can certainly argue that as a result of the Cox
17 litigation and their learning about it, they had knowledge that
18 there were serious concerns surrounding the way that Grande was
19 dealing with the Rightscorp notices in either dealing with it
20 or not dealing with it, which was mostly not dealing with it,
21 until a point in time.

22 MR. BROPHY: Your Honor, I apologize. My colleagues
23 have had a lot of time to discuss this you. May I make one
24 quick point to you on this matter? I think it's important for
25 you to understand.

1 THE COURT: Okay.

2 MR. BROPHY: Fifteen seconds. We've been discussing
3 the change in our behavior. We did not change our behavior as
4 it relates to Rightscorp.

5 THE COURT: Their position is different. This, I
6 understand. I understand your argument. You changed your
7 position with respect to -- for reasons other than with respect
8 to Rightscorp.

9 MR. BROPHY: Well, no, Your Honor, we didn't start --

10 THE COURT: That would be the argument I would make.

11 MR. BROPHY: Well, I may make that one also, but my
12 point is when Grande started up its termination program in
13 2017, it didn't process Rightscorp notices to terminate
14 customers. It never has. And so this change in behavior was
15 related to only non-Rightscorp notices. So our position -- I
16 just want to make sure you understand that -- our position is
17 this change in behavior is not relevant to this case because
18 Grande didn't say, oh, gosh, we're going to start terminating
19 people based on these Rightscorp notices now. That never
20 happened. We've never terminated someone.

21 THE COURT: Okay.

22 MR. BART: Your Honor --

23 THE COURT: They don't have to have direct evidence
24 that that happened.

25 MR. BART: And also that's not accurate. This will

1 all come out in the wash. There's no point in us debating.

2 THE COURT: All right. I don't want -- yeah, but they
3 don't have to have direct evidence because it's very unlikely
4 that somebody from Grande, even if that happened -- well, I'm
5 not going to suggest somebody would perjure themselves, but
6 let's just say that it would be unlikely that we would see
7 somebody stand up or sit down on the stand and testify, Oh,
8 yeah, we heard about the Cox litigation and, man, that just
9 terrified us and we changed our position immediately.

10 It's a little bit like our Title VII cases. Okay?
11 Somebody comes in, and they say, You know, I'm going to be --
12 have to be out for six months because I have to have a certain
13 medical procedure done. And two days later, they're fired,
14 okay. And the employer says, now, we employ a system --
15 McDonnell Douglas test, as you probably are all aware. You
16 don't do that kind of work, but anyway, we use the McDonnell
17 Douglas test in Title VII cases. Is going to say, No, we fired
18 them because they were incompetent. They were incompetent all
19 along.

20 But the Appellate Courts have said -- and, in fact, I
21 wrote an opinion that said this -- that the proximity of an
22 action to an event is circumstantial evidence that it was
23 pretext. Okay? So they have circumstantial evidence, they
24 say -- we will see -- that your client changed their position
25 on or about the time -- within a reasonable time -- of the Cox

1 litigation coming down. Okay?

2 Now, is it direct evidence? No. Is it circumstantial
3 evidence? It depends upon the jury. And I'm not going to
4 stick myself in the jury box. That would be the fastest way
5 for me to get reversed. And I don't want to retry this case.
6 I can promise you.

7 Okay. Anything else? You've got plenty of time here
8 because we're not going to be back until one -- close to 1:30,
9 so you can still have lunch and chat. If you can't reach an
10 agreement right away, you know, I'm not suggesting you sit in
11 here all lunch hour.

12 MR. BART: No, I think it would actually be best if we
13 each went our separate ways and we met back here.

14 MR. BROPHY: I was going to propose the same thing.

15 THE COURT: All right. Well, why don't you come back
16 you know, like, 1:15 or something. We'll make sure the
17 courtroom is open for you. We lock it, but we'll make sure
18 it's open for you to come back.

19 Right, Priscilla?

20 COURTROOM DEPUTY CLERK: Yes, Judge.

21 THE COURT: She doesn't have to go see Judge Yeakel.
22 I do.

23 COURT SECURITY OFFICER: All rise.

24 *(11:13 a.m., lunch recess.)*

25 * * *

1 (1:23 p.m.)

2 * * *

3 COURT SECURITY OFFICER: All rise.

4 THE COURT: Please be seated. Well, hope springs
5 eternal, but for some reason I have a feeling that it ain't
6 working in this case.

7 MR. BROPHY: I think we may have some good news.

8 THE COURT: Oh, I might fall off the chair here.

9 MR. BROPHY: I think we've determined that there is no
10 opening of the door. And what remains now is plaintiff's
11 questions about what they're just allowed to elicit from their
12 testimony in general, from the witness in general.

13 THE COURT: Do you have -- well, I know what your
14 suggestion is.

15 MR. O'BEIRNE: Well, to narrow our proposal, Judge --

16 THE COURT: All right.

17 MR. O'BEIRNE: -- so we did have the opportunity to
18 confer and we have agreed I think on a couple points. Number
19 one, we just want to address, only as to this witness, what
20 questions we can ask on redirect.

21 THE COURT: All right.

22 MR. O'BEIRNE: And secondly, we're not going to argue
23 that we would be able to do more than would otherwise be
24 permissible redirect based on the cross, the door-opening
25 issue. We do think there are two points that we think are

1 proper redirect, regardless, that we'd like to be able to
2 elicit based on the cross.

3 He mentioned the BMG case's involvement and was shown
4 his deposition about his code. And we want to elicit that he
5 provided his code in 2014 and '15 in connection with that case,
6 including to the experts on the other side.

7 THE COURT: I don't have a problem with that.

8 MR. O'BEIRNE: And that he did the same in this case
9 and provided his code to the other side and their experts.

10 THE COURT: I don't have a problem with that either.

11 MR. BROPHY: Your Honor, may I ask one question about
12 that or make a point?

13 THE COURT: Yes. Of course.

14 MR. BROPHY: I have a concern about tying all this up
15 later. So this witness identifies -- I've been careful about
16 not mentioning the BMG/Cox case when introducing transcripts.
17 I've only been mentioning another case dealing with the
18 Rightscorp system. And what the plaintiffs intend to do is
19 elicit from him the name of that case in the hopes that later
20 they can show documents that have that name in it and tie it up
21 and say, you know, Grande's people knew about this case, and
22 the software was in front of the jury in that case. And link
23 up and lend further credibility to the legitimacy of the
24 Rightscorp system by making that linkage.

25 And that's why I have a concern about him testifying

1 about the name of the litigation. I don't understand why
2 that's necessary. We don't have an objection to him saying
3 that he produced software in litigation, but why does he have
4 to start naming specific litigations in this case? That
5 doesn't make sense to me.

6 MR. O'BEIRNE: Your Honor, those are facts in the
7 record that -- and Grande's documents will be introduced
8 separately, that the BMG versus Cox case involved Rightscorp's
9 system. He's already testified to it. It's a matter of fact,
10 we're not looking to extrapolate conclusions from it, but
11 testimony has been elicited about his deposition and his
12 involvement in that case. We just want to acknowledge he gave
13 his code.

14 THE COURT: As I've said before, the only reason that
15 these previous cases are at all relevant here is to show
16 knowledge and to possibly show willful blindness. Not because
17 of the result. I mean, it wouldn't make any difference to me
18 if the case had come out the other way. It would still involve
19 his software. And just the mere fact that a litigation was
20 going on is oftentimes enough to have companies say, You know,
21 there's litigation around the country going on about this,
22 maybe we ought to take another look at this, that, or the other
23 thing. Not necessarily the outcome of the case. The outcome
24 of the case has no relevance here.

25 MR. O'BEIRNE: And I don't intend to ask him about

1 that, Judge, merely that --

2 THE COURT: All right. Well, you stay within those
3 parameters, and we're okay. I'm not as concerned, counsel, as
4 you are about the name. Now, if they try to go too far in
5 quote/unquote tying it up, I'm sure I'll hear from you.

6 MR. BROPHY: No doubt.

7 THE COURT: And I'll rule on it at that time.

8 MR. BROPHY: Thank you, Your Honor. Appreciate the
9 consideration.

10 THE COURT: I'm not pre-ruling on it. I'm not saying
11 I won't agree with you.

12 MR. BROPHY: I understand. Thank you very much.

13 THE COURT: All right. Are we all ready to go?

14 MR. O'BEIRNE: We're just grabbing Mr. Boswell.

15 THE COURT: Okay. So you're not going to go home this
16 weekend, huh? Well, if you have some extra time, if you're --
17 I mean, I know you're going to work on this case, because
18 that's the way it goes, but you know, it's three days. So
19 there are some really nice places to visit here. You could get
20 a car and go to Fredericksburg, which is the home of the
21 Chester W. Nimitz Pacific War Museum. It's very interesting,
22 because Admiral Nimitz was from Fredericksburg.

23 And then, of course, if you're as old as me -- nobody
24 is, but you're close -- you remember Lyndon Baines Johnson,
25 who's very important to me because of the Vietnam War. His

1 home is in Stonewall, and his -- the western White House, so to
2 speak, was there. A lot of important decisions were made
3 there. Not that -- I mean, it's a nice drive and it's the
4 Texas Wine Country up there, which is second only, by the way,
5 to New York.

6 *(Discussion off the record.)*

7 COURT SECURITY OFFICER: Please rise for the jury.

8 *(1:40 p.m., the jury enters the courtroom.)*

9 * * *

10 THE COURT: Good afternoon, ladies and gentlemen.
11 Again, a reminder, we will be breaking at 3:00 this afternoon.
12 All right, counsel, you can continue.

13 MR. O'BEIRNE: Thank you, Your Honor.

14 BY MR. O'BEIRNE:

15 Q. Mr. Boswell, before we broke earlier today, I was asking
16 you some questions about other litigation involving
17 Rightscorp's data between BMG and Cox and ISP. Do you recall
18 that?

19 A. Yes, I do.

20 Q. Do you recall that you provided your code in connection
21 with that litigation to both parties in that case and their
22 experts?

23 A. Yes, I did.

24 Q. And that was in 2014 and in 2015?

25 A. That is correct.

1 Q. And do you also recall that in this case you provided all
2 of your code to Grande and its counsel and its experts?

3 A. Yes, I did.

4 Q. And also to plaintiffs and our expert?

5 A. Yes.

6 Q. I'd like to return just briefly to this time period of the
7 notices based on 10 percent bit fields and just clarify one
8 point. Every time Rightscorp was engaging in a handshake, was
9 it always capturing whatever bit fields the other computer had
10 and was offering?

11 A. That is correct.

12 Q. So were you always getting 100 percent of the bit fields
13 that they were reporting to you?

14 MR. BROPHY: Objection, Your Honor, leading.

15 THE COURT: Sustained.

16 BY MR. O'BEIRNE:

17 Q. What percentage of the bit fields that the other person was
18 offering to you did Rightscorp report in every single
19 handshake?

20 A. Whatever they gave us. A hundred percent of what they gave
21 us, we recorded.

22 Q. So they would report what they had, and you would record
23 it?

24 A. Yes.

25 Q. The 10 percent threshold that's in the notice, did that

1 happen internal to the Rightscorp system apart from the
2 handshake?

3 A. Yes.

4 Q. You were asked some questions on cross-examination about
5 the Samplit system attempting to make downloads from IP
6 addresses that had received notices. Do you recall that?

7 A. Yes, I do.

8 Q. Did you design Samplit to attempt to obtain a download from
9 every single person who had ever gotten a notice?

10 A. No.

11 Q. I think the phrase you used to the jury was, *It wasn't*
12 *meant to operate at the same scale as Infringement Finder?*

13 MR. BROPHY: Objection, Your Honor, leading.

14 MR. O'BEIRNE: Just reorienting to his testimony.

15 THE COURT: Overruled.

16 BY MR. O'BEIRNE:

17 Q. I believe the term you used was, *It wasn't meant to operate*
18 *at the same scale as Infringement Finder.* Do you recall that?

19 A. I recall that.

20 Q. Please explain that to the jury.

21 A. Well, you know, if we collected a notice -- sample for
22 every notice -- we have in one of our databases over
23 1.1 million notices. If you multiply that times three or four
24 megabytes per notice, we would completely swamp whatever
25 hardware we had at that point in time and probably continue to

1 swamp hardware for the foreseeable future. Very few databases
2 can maintain that level of size. MySQL is limited to 256
3 terabytes per table situation. And if we start to go and grab
4 everything, you quickly run out of hardware and database.

5 Q. So was Samplit engaging in far fewer handshakes attempting
6 to make downloads than the handshakes that had -- Infringement
7 Finder had engaged in?

8 A. Yes, it had.

9 Q. To be clear, had you not used SimpleIt at all, had you
10 never made any downloads, in your mind would that undermine the
11 accuracy of what the Infringement Finder detected?

12 A. No, not at all.

13 Q. You were asked some questions on cross-examination about
14 whether or not -- if Samplit was unable to download a copy of
15 the file from an IP that had received a notice, whether you
16 would ever go back and alert the ISP that somehow the notice
17 was wrong. Do you recall that, sir?

18 A. I do recall that.

19 Q. Based on how your system is designed, is not being able to
20 find or download from the peer in any way undermine the data in
21 the original notice?

22 A. Oh, not at all.

23 Q. You were asked some questions on cross-examination about
24 times where Infringement Finder would get bit fields from a
25 second handshake that were different than the bit fields of the

1 file in the notice. Do you recall that?

2 A. There were different than the bit fields in the notice?

3 Q. The bit fields representing the song in the notice.

4 A. I don't recall that direct question.

5 Q. Do you remember testifying about database characters having
6 a hard time matching names depending on if certain characters
7 were used?

8 A. Yes.

9 Q. So I want to return to that topic briefly.

10 When Samplit would determine to go get certain bit fields
11 from someone who had already received a notice, was Samplit
12 always, any time it downloaded it, getting the bit fields it
13 was looking for?

14 A. Samplit would get the bit fields it was looking for.

15 Q. In that handshake?

16 A. In that handshake, yes.

17 Q. Was the naming convention -- was the name, you know,
18 character issue an issue about which bit fields Samplit was
19 told by the system to go get, or which ones it was asking the
20 peer for? Do you understand my question?

21 A. I do. As I said before, it's -- you know, it went and if
22 it couldn't do an exact name match, then it would get the first
23 set of whatever record it was. Sometimes it would be, you
24 know, a picture or things of this nature.

25 Q. But whatever it was getting, was the payload that it was

1 getting part of the torrent that was the subject of the notice?

2 A. Oh, absolutely, yes.

3 Q. You were asked some questions on cross-examination about
4 other systems, including ones that took screen shots. Do you
5 recall that?

6 A. Yes, I do.

7 Q. You mentioned the concept of someone sitting at a computer
8 doing operations. Do you recall that?

9 A. Yes, I do.

10 Q. And you used the term "headless," that the Rightscorp
11 system is headless.

12 A. Correct.

13 Q. Were you manually sending out any notices, or was it an
14 automatic operation of the system?

15 A. This is a automatic operation. This is a server-based
16 solution.

17 Q. Is there any way for your system to generate a notice when
18 it has not made a positive hash match with the peer that it's
19 handshaking with?

20 A. No.

21 Q. Is there any way for your system to generate a notice if it
22 hasn't obtained bit fields from the peer that it's handshaking
23 with?

24 A. No.

25 MR. O'BEIRNE: Can you please pull up PX 40?

1 BY MR. O'BEIRNE:

2 Q. Do you recall, Mr. Boswell, this is an example notice for
3 the Bruno Mars song that we looked at yesterday. Do you recall
4 that, sir?

5 A. Yes, I do.

6 MR. O'BEIRNE: Conner, please go to the top of the
7 last page.

8 BY MR. O'BEIRNE:

9 Q. Mr. Boswell, do you see that hash value that's included in
10 there?

11 A. Yes, I do.

12 Q. Is that the hash value of the torrent file that
13 Infringement Finder matched this user is offering?

14 A. Yes, it is.

15 MR. O'BEIRNE: Could you go back up to the first page
16 of the notice to the file name?

17 BY MR. O'BEIRNE:

18 Q. The file name, number two, *Just The Way You Are*, before
19 Infringement Finder -- strike that.

20 Before the Rightscorp system sent this notice, did it
21 confirm that the bit fields that the peer had sent matched the
22 bit fields of *Just The Way You Are*?

23 A. Yes, it did.

24 Q. So you were asked some questions about whether the ones and
25 zeros of the bit fields appear in the notice. Do you recall

1 that, sir?

2 A. Yes, I do.

3 Q. In your view, is the information represented by the ones
4 and zeros of the bit field in this notice?

5 A. It's been memorialized in the name of the song.

6 Q. Now, we listened to the download of that song with the same
7 TC number. Do you recall that?

8 A. Yes, I do.

9 Q. When Samplit went to get that song from that user, what
10 information did it get from the system to go look for?

11 A. It went -- and if you want to scroll up, to the top of the
12 XML document. Scroll down the page. Keep going. Right there.

13 Let's look at the XML document. So this is the XML
14 document that we send in the notice that allows -- allows for
15 monitoring of what we've just done. So it looks at the time
16 stamp -- well, what did it look at to get it? It looked at the
17 torrent hash, which is the hash. It looked at the port in the
18 IP address, which are -- the port is right there above your
19 cursor and the IP address is right there.

20 Q. And I think you testified in the notice, obviously, the
21 song is there by name, but Samplit pulled the bit field range
22 that you know has that song in the torrent payload to go try to
23 download, right?

24 A. That is correct. It looked up that name in the torrent
25 payload that it was given and requested the bit fields for it.

1 Q. And the download we listened to was only successfully
2 downloaded, do you agree, because Samplit was able to go ask
3 for exactly the bit fields --

4 MR. BROPHY: Objection, Your Honor. Leading. He's
5 asking the witness to agree with things.

6 THE COURT: Sustained.

7 BY MR. O'BEIRNE:

8 Q. Which bit fields did Samplit go get in order to generate
9 the file Bruno Mars, *Just The Way You Are*?

10 A. The ones associated that were needed to produce the file.

11 Q. From the torrent hash that was the subject of the notice?

12 A. That is correct.

13 MR. O'BEIRNE: May I have a moment, Your Honor?

14 THE COURT: Of course.

15 (1:52 p.m.)

16 BY MR. O'BEIRNE:

17 Q. You were asked some questions on cross-examination about
18 whether you ever asked your clients to prove that they owned
19 the copyrights that they were asking you to monitor. Do you
20 recall that?

21 A. Yes.

22 Q. Did you trust your clients, when they hired you to monitor
23 for their copyrights, that they owned them?

24 A. Yes.

25 Q. And you were asked some questions about whether you could

1 create a system on top of your code to purposely send out false
2 notices. Do you recall that?

3 A. Something to that effect.

4 Q. Did you ever do anything like that, sir?

5 A. No.

6 Q. Would you ever do anything like that?

7 A. No.

8 MR. O'BEIRNE: That's all I have, Judge.

9 MR. BROPHY: Nothing further.

10 THE COURT: All right. You can step down, sir.

11 THE WITNESS: Thank you, Your Honor.

12 MR. O'BEIRNE: Your Honor, plaintiffs call Barbara
13 Frederiksen.

14 COURTROOM DEPUTY CLERK: Please raise your right hand.

15 You do solemnly swear that the testimony you're about
16 to give in this case now before the Court will be the truth,
17 the whole truth and nothing but the truth, so help you God?

18 THE WITNESS: I do.

19 COURTROOM DEPUTY CLERK: You can have a seat.

20 * * *

21 *(BARBARA FREDERIKSEN-CROSS, Plaintiff Witness, Sworn.)*

22 * * *

23 DIRECT EXAMINATION

24 BY MR. O'BEIRNE:

25 Q. Good afternoon, Ms. Frederiksen.

1 A. Good afternoon, counsel.

2 Q. How are you?

3 A. Good.

4 Q. Could you please introduce yourself to the ladies and
5 gentlemen of the jury?

6 A. My name is Barbara Frederiksen-Cross. And for the court
7 reporter's benefit, that's F-R-E-D-E-R-I-K-S-E-N, hyphen,
8 C-R-O-S-S.

9 Q. Ms. Frederiksen-Cross, where do you currently work?

10 A. I work for JurisLogic in Portland, Oregon.

11 Q. What is JurisLogic?

12 A. JurisLogic is a company that specializes in providing
13 computer and data forensics to industry and to the legal
14 profession.

15 Q. What is your position there?

16 A. I'm the director of forensic services.

17 Q. Can you please tell the jury what your connection to this
18 case is?

19 A. Yes. I have been asked to do two things today -- or in my
20 testimony. One is to provide to you some background on the
21 technology, both BitTorrent and the Rightscorp system, and the
22 other is I was asked to perform an independent evaluation of
23 the effectiveness and accuracy of the Rightscorp system; and so
24 to describe to you my findings about that system.

25 Q. Are you here to provide those opinions to the jury?

1 A. That is correct, yes.

2 Q. Before we do so, I'd like to have you tell the jury a
3 little about yourself. Please tell us where you're from.

4 A. Originally born in Palo Alto, California. I got my
5 introduction to programming in junior high. I was one of those
6 very nerdy kids who loved math and science, so in about seventh
7 grade, I started learning to program in what would be a STEM
8 class today. I don't think that term had been invented yet
9 then. And I was fascinated by it.

10 And when I got to high school, my science teacher in high
11 school, whose aide I was for the science classes, recognized
12 that I loved this, and he made arrangements for me to have
13 access to a local university's -- Lynfield College -- computer
14 system, so that I could continue my interest and then
15 encouraged me to leave high school at 16 and go and get a
16 degree in computer programming.

17 So I finished high school at 16. I went to a local
18 community college, and I got an Associate's degree in computer
19 programming. And in those days, there was a huge demand for
20 programmers, so I entered the workforce immediately. I
21 actually had to get a work permit to start working because I
22 wasn't 18 yet when I entered the workforce, and so I worked
23 initially for the County, and then once I passed the State
24 Boards, I switched to working for the State of Oregon for a few
25 years.

1 Q. Moving from working for the State Board, what was your next
2 job in software programming?

3 A. Well, I got a lot of training from -- directly from IBM
4 during the four years that I was with the State, so I started a
5 consulting company when I was 21, and my specialty was systems
6 that had very high performance demands. So in those days that
7 was banks, telephone companies, insurance companies, the big
8 iron. And so my consulting business was remediating
9 performance problems in those systems and also developing
10 customized telecommunication systems.

11 Q. Any names of clients that we might recognize that you did
12 work for in that time period?

13 A. First Interstate Bank, U.S. Bank, Standard Insurance, Met
14 Life, Mutual Insurance, little bit of work for Bell, a little
15 bit of work for -- those are probably the big ones that would
16 be recognizable. And some work for the government as well.

17 Q. In general terms, can you describe to the jury the kind of
18 work that you were doing for these clients at that time?

19 A. I was coming in, diagnosing problems, developing models of
20 computer behavior so that we could identify bottlenecks in
21 processing or ways to improve the performance of the system and
22 then developing fixes to implement the recommendations that I
23 had.

24 Q. All in, how many years have you been working in the
25 computer forensics field?

1 A. Little over 48 years now.

2 Q. You say 48?

3 A. Oh, in forensics, specifically -- 48 in programming.

4 Forensics, I got involved in in the mid-'80s and so...

5 Q. Let's turn to that. Please describe -- when did you start
6 working with JurisLogic?

7 A. Actually, I worked with the predecessor company JLI in the
8 mid-'80s, shortly after I had gotten my introduction to
9 forensics, and then I switched my practice from both software
10 development and systems administration and modeling to
11 forensics full-time in 1997. So that's been the focus of my
12 practice since then.

13 Q. Before we go on, could you please explain what you mean by
14 computer forensics?

15 A. Sure. It's the analysis of computer software or in some
16 cases computer data or things like hard-disk analysis
17 specifically to answer questions that might come up in the
18 course of an investigation, such as a fraud investigation or a
19 copyright dispute or a trade secret dispute or sometimes just,
20 you know, how a particular system was hacked or how a
21 particular piece of software was hacked so that I can advise my
22 clients or, in some cases, like, litigation matters, testify in
23 court about my findings.

24 Q. Is there a difference between computer forensics and
25 software forensics?

1 A. Software forensics is kind of a subcategory of computer
2 forensics, because in computer forensics that also includes
3 things like recovering deleted files from hard disks and
4 searching Internet histories and scanning logs and things,
5 where software forensics is typically focused on the specific
6 operation of the software or of a software control device.

7 Q. Can you please describe for the jury some of the clients
8 you've worked for, to the extent you can disclose them, in
9 connection with your forensic expert work?

10 A. Some of the more recognizable names would probably be
11 Apple, Facebook, Caterpillar, Techtronics, Nike, Semantic,
12 TheAntiVirusGuys, companies like that, as well as a number of
13 smaller companies, of course.

14 Q. Have you ever worked in criminal investigations?

15 A. Yes. I worked as a consultant to the FBI and the federal
16 government as well as to state and local governments, and for a
17 number of years I worked as an adjunct to the Silicon Forest
18 high-tech crime team, which was a partnership between police
19 industry and people who were in the forensic field.

20 Q. What was the name of that force?

21 A. It's call the -- it was called at the time the Hillsboro
22 Silicon Forest team. That's basically -- Oregon is known as
23 the Silicon Forest because of Intel's presence there and the
24 presence of some other manufacturers.

25 Q. Do you belong to any professional organizations?

1 A. The ICM -- sorry, ACM and IEEE.

2 Q. Taking ACM first, what's the ACM?

3 A. ACM used to be called the Association of Computing
4 Machinery, and it's an educational research organization for
5 people in the information technologies field.

6 Q. And was there another professional organization that you
7 had mentioned?

8 A. Yeah, IEEE. And that's an organization of electrical
9 engineers, and it's expanded over the years to encompass
10 software as well. Again, it's a research and educational
11 institution. Both are nonprofits, and they both exist, really,
12 to further knowledge in the field.

13 Q. Ms. Frederiksen-Cross, I'm going to show you, but not the
14 jury yet, an Exhibit, PX 548. Can you pull that up, please?

15 Do you recognize this document, ma'am?

16 A. Yes. It's my curriculum vitae or resume.

17 Q. Do you recall providing your CV to us in connection with
18 your work in this case?

19 A. Of course.

20 Q. I'd like you to describe for the jury work you've done in
21 cases specifically involving BitTorrent. Not names of cases,
22 just kinds of cases and the amount.

23 A. I've been involved in several other cases that have a fact
24 pattern somewhat similar to this that involved technologies,
25 Rightscorp and other companies, that detect activity on the

1 BitTorrent network and report on that activity. And I've also
2 been involved in a patent case that was directed to BitTorrent
3 technologies.

4 Q. And does your CV accurately describe your experience, your
5 education, and these other cases that you've been involved in?

6 A. Yes, it does.

7 MR. O'BEIRNE: Your Honor, at this time, I offer
8 Plaintiff's Exhibit 548 into evidence.

9 MR. BROPHY: Your Honor, this is hearsay and
10 inadmissible.

11 THE COURT: Her curriculum?

12 MR. BROPHY: Yes.

13 THE COURT: It will be received.

14 BY MR. O'BEIRNE:

15 Q. You were describing for the jury cases that you've been
16 involved in involving BitTorrent. Again, without mentioning
17 any proper names of the cases, what kind of aspects or issues
18 involving BitTorrent have you examined as an expert?

19 A. In those cases, I have provided tutorials about the
20 BitTorrent technology. I analyze software from various
21 companies that was used to detect activity on the BitTorrent
22 network, so to evaluate how those -- how that software worked
23 and whether or not it could effectively detect BitTorrent
24 activity and report on it and provide notices on it.

25 I also looked at some of the software that some companies

1 have that handle notifications related to BitTorrent. So some
2 companies have automated their handling of the e-mail notices
3 they get so that they can more effectively or efficiently
4 process the volumes of notices they get.

5 Q. Specific to BitTorrent software, have you examined the
6 code, the underlying code, of various BitTorrent software
7 clients?

8 A. I have examined the code for the original BitTorrent
9 client, and then the -- what's called the libtorrent
10 implementation that underlies many of the popular clients
11 today, so I've studied that code extensively, both in the
12 context of my own interest and in casework that I've done.

13 I have also looked at the aspects of detection software for
14 the Rightscorp system and for other systems that are used to
15 detect BitTorrent activity.

16 MR. O'BEIRNE: Conner, could you scroll down to the
17 section describing papers and publications.

18 BY MR. O'BEIRNE:

19 Q. Ms. Frederiksen, does your CV accurately describe articles
20 you've authored and presentations you've made in connection
21 with your expert work?

22 A. Yes, it does.

23 Q. And what are these publications geared towards?

24 A. Some are geared towards software developers. So, for
25 instance, the papers on reverse engineering and how to work

1 reverse engineering techniques. Some are directed towards the
2 legal profession or people who have to either respond to
3 large-scale document production requests or handle large-scale
4 document production requests, so freedom of information
5 requests or production as we would see in a case like this
6 where there are large volumes of evidence.

7 And I think a couple of them are directed to criminal
8 matters. And just proper procedures for imaging computers or
9 seizing computers and the tension between some of the
10 publication rights and what's necessary to preserve evidence
11 for law enforcement.

12 Q. Aside from Rightscorp's technology, have you looked at
13 other technology designed to detect BitTorrent activity?
14 Without naming which other company's technology you have
15 reviewed, have you been an expert in cases about software
16 detection technology other than Rightscorp?

17 A. Yes, I have. Just to clarify the record, BitTorrent
18 detection rather than software detection.

19 Q. Yes. Sorry. Software to detect BitTorrent activity.

20 About how many times have you been admitted as an expert in
21 litigation?

22 A. I think this case is my 30th case testifying at state or
23 federal court. I've also been admitted as an expert in a
24 couple of arbitrations, and I've also served the court directly
25 as an independent expert on a couple of occasions.

1 Q. You just mentioned that you have occasionally been an
2 expert for the court. Do you only provide expert services to
3 plaintiffs in litigation?

4 A. No. I don't control who is on the other end of the phone
5 when I answer the phone.

6 Q. Fair to say you act as an expert for plaintiffs and
7 defendants within your expertise?

8 A. As well as the court, should they so desire, yes.

9 Q. Any other relevant experience you think the jury should
10 know?

11 A. None that comes to mind just as I sit here.

12 Q. I want to make sure to ask.

13 MR. O'BEIRNE: Your Honor, plaintiffs tender
14 Ms. Frederiksen-Cross an expert in computer and software
15 forensics, especially including BitTorrent.

16 MR. BROPHY: We have no objection, Your Honor.

17 THE COURT: Her testimony will be received as such.

18 BY MR. O'BEIRNE:

19 Q. Ms. Frederiksen-Cross, I'd like to turn your attention now
20 to just a summary of your opinions in this case. You're
21 familiar, as we've said, with the name Rightscorp?

22 A. Yes, I am.

23 Q. What is Rightscorp?

24 A. Rightscorp is a company that provides software to its
25 clients; the purpose of which is to detect activity

1 specifically on the BitTorrent protocol for peer-to-peer file
2 sharing, and then to report on that activity by preparing
3 notifications that it sends to Internet service providers based
4 on that information it's collected.

5 Q. Are you aware whether Rightscorp sent notices in connection
6 with copyright infringement it detected to Grande in this case?

7 A. I am, and it did.

8 Q. What were you asked to do in this case?

9 A. Really focus of what I was asked to do here was, first of
10 all, to help make sure that the jury understands the
11 technologies that we're talking about, including both
12 BitTorrent and the operation of the Rightscorp system. And
13 then I was asked to examine the Rightscorp system in order to
14 understand how it operates and whether, in my opinion as a
15 software developer and also as an expert in forensics in
16 BitTorrent, whether it's an effective way to detect activity on
17 the peer-to-peer networks and whether it's an effective way and
18 an accurate way to prepare notifications of that activity that
19 it detects that it provides to the ISPs.

20 Q. Please explain to the jury what materials you considered in
21 preparing your opinions in this case.

22 A. I examined the Rightscorp software and its operation. I
23 examined evidence that was collected and produced by that
24 system both with respect to some of the information that -- I'm
25 sure you've seen some of it in the course of the litigation

1 already, and I'm sure you'll see more that was actually
2 collected and stored in Rightscorp's databases about the
3 detections that it made.

4 I was also given access to the deposition testimony of the
5 Rightscorp developer, Mr. Boswell, whom you've already heard
6 from. I was given access to other technical documents that
7 came up in the course of the productions of the parties in this
8 case.

9 Q. You mentioned reviewing source code. Please explain to the
10 jury what is source code.

11 A. Source code is the set of instructions that are written in
12 a reasonably human friendly fashion that one would give to a
13 computer to solve some particular problem. Typically, they get
14 translated then into the machine language that the computer
15 understands, but it's the way you write programs.

16 Q. You mentioned reviewing Rightscorp's code. Did you
17 review -- did you have the opportunity to review outputs of
18 Rightscorp's code that were taken in 2014, '15 and again in
19 '18?

20 A. I think the earliest version was produced to me in 2014,
21 but I believe that was actually a version from 2013 and then
22 from 2015 and 2018 is correct.

23 Q. You've looked at several outputs from the system describing
24 the code?

25 A. Well, I've actually looked at the source code itself, it's

1 not an output from the system so much, it's just an extract of
2 the source code.

3 Q. Thank you for clarifying. The code itself?

4 A. The code itself, yes.

5 Q. You looked at how it was in '13, '14, '15 and '18?

6 A. That's correct, yes.

7 Q. Did you perform, without getting into the details yet, did
8 you perform any independent testing of your own on the
9 Rightscorp system?

10 A. Yes, I did.

11 Q. Based on your review of the information in your testing,
12 did you come to any conclusions regarding the reliability of
13 the Rightscorp system?

14 A. Based on my testing and my review of the source code, I
15 believed that the Rightscorp system uses a sound approach to
16 detecting peer-to-peer activity. I believe that it collects
17 accurate information about the activity that it collects in
18 those interactions with peers. And based on my testing, I
19 believed that the notifications it sends are accurate as well.
20 I mean it actually detected my activity and I got to examine
21 the notices that it sent based on my activity.

22 Q. Before we talk more about your specific review of the
23 Rightscorp system, I'd like to take a step back and talk to the
24 jury about BitTorrent and the use of BitTorrent over the
25 Internet. Did you prepare some slides to assist the jury in

1 reviewing this information as part of your testimony?

2 A. Yes, I did.

3 Q. And we're going to walk through the slides and to the
4 extent you can use the slides to help demonstrate a point to
5 the jury, please do so?

6 A. Okay.

7 Q. And we have heard some testimony about this and I think
8 this is straightforward, but what is an ISP?

9 A. An ISP is an Internet service provider, it's a company that
10 provides access to the Internet through its services. I mean
11 they might provide other services like telephone or television,
12 but originally they were Internet service providers.

13 Q. Is it your understanding Grande is an ISP?

14 A. That is correct, yes.

15 Q. Next slide please. I'd like to talk to you first about the
16 basics of communication over the Internet and how it occurs,
17 what's being portrayed on this slide?

18 A. On the left-hand side I show a couple subscribers of an
19 ISP, you know, in this case I put Grande on it, but it could be
20 any ISP really, they all function pretty much the same. And
21 devices on the Internet are assigned an IP address. That IP
22 address might be a single computer or it might be a router that
23 connects like your wireless router for your home. In order to
24 communicate with the Internet and other computers that are
25 connected on the Internet like a server or Google server or You

1 Tube or anything else, a computer communicates through the
2 service or through the pipe that the ISP provides to the
3 Internet, so there's a hop-hop-hop of communications from where
4 you are to get to where you want to go, but ultimately the
5 Internet protocol allows that to be routed to the computer
6 you're trying to communicate with. And the way that happens is
7 really through the connection of these IP addresses. Now, you
8 might ask for a company like apple.com, but what happens is
9 apple.com gets translated to a particular IP address that's
10 their landing point for that communication.

11 Q. What's being depicted on the right-hand side of the slide,
12 the server, Ms. Frederiksen-Cross?

13 A. This is just in this case a generic server, so one form of
14 communication across the Internet is for your machine, for
15 instance, your browser to communicate with some service
16 provided by another computer, that might be your bank, it might
17 be a Google server, it might be You Tube server, but you're
18 communicating to a server or servers out there that are then
19 providing you back the content you request, so that is
20 typically called a client server model where you are the client
21 and the server is another machine on the Internet.

22 Q. And you mentioned the IP address to the left underneath the
23 Grande subscriber, that that was assigned. By whom was that
24 assigned?

25 A. It's assigned by the ISP to a particular machine for a

1 particular point in time and often the IP addresses are
2 variable, so they may change over time. If you pay a little
3 extra you can get a fixed IP, so like my IP is always the same
4 number, but it's assigned by the Internet service provider to a
5 particular router or machine.

6 Q. Are you familiar with the term "ARIN" in connection with IP
7 addresses?

8 A. Yes.

9 Q. Please explain to the jury what is ARIN?

10 A. ARIN is the American Registry of Internet Numbers and it
11 administers the IP addresses for most of the western
12 hemisphere. And what that means is in effect is that ARIN will
13 assign a block or blocks of IP addresses to a particular ISP or
14 a particular in some cases like a government organization. And
15 so that means that any IP in that range is going to be owned by
16 that entity and that entity provides contact info to ARIN for
17 administration of that block of addresses. Like an ISP would
18 then essentially sublet or sub assign those addresses to its
19 subscribers.

20 Q. So Grande has a block of IP addresses assigned to it by
21 ARIN?

22 A. If my recollection serves correctly, several blocks, but
23 yes, they have chunks of IP addresses that are assigned to them
24 by ARIN.

25 Q. In your opinion, is it a reliable method if I obtain an IP

1 address and I want to know who controls it, I go to ARIN, I
2 search and ARIN tells me?

3 A. You can go to ARIN or Network Solutions or any other
4 several entities who basically provide that registration
5 information to you. ARIN is the master registry, but there are
6 other ways you can get it as well.

7 Q. Publicly available information?

8 A. It's publicly available. Like, you can take an IP address
9 and do what's called a reverse look-up and it will tell you
10 both the ISP and who it's been assigned to in many cases.

11 Q. I see there's a port number listed on the left-hand side
12 below the IP address. What does that signify?

13 A. The easiest way to think of this is that the IP address --
14 I think Mr. Boswell also used this analogy. The IP address is
15 like a street address and the port number is who you want to
16 talk to at that address. So it might be an e-mail client, it
17 might be IP address for browser or file transfer protocol or
18 for some other program. That way when communication comes into
19 your computer, your computer knows what application to hand
20 that to, is this e-mail or is this, you know, a browser thing
21 or is this something else.

22 Q. Next slide. You were just describing if your e-mail
23 receives a communication. Is that what's being depicted on
24 this slide?

25 A. Sorry, I didn't watch the build on it.

1 Q. That's okay. So the first slide you were talking about,
2 the computer on the left-hand side, sending request for
3 information to the server?

4 A. Right, and then the server will -- think of it as if you
5 were sending a letter to someone, you have your address and the
6 recipient written on the letter and you also have the return
7 address. When you communicate over the Internet the
8 communications that you send carry that same kind of
9 information. So if I sent a request to a server, I'm sending
10 my IP address and also typically the port that I want to
11 receive back the response, then the server takes that and
12 switches it just as you would if you were responding to
13 someone's e-mail, you address your response back to that
14 particular computer and that particular application.

15 Q. And there are a variety of file types represented there.
16 What's that meaning to reflect?

17 A. Well, these communications can involve a web page, they can
18 involve a video, they can involve sound, they can involve a
19 document or a picture or even a combination. Like when you go
20 to New York Times, you get text and you also get pictures and
21 ads, they're all getting served to you from the New York Times
22 server.

23 Q. Keeping this slide up, I'd like to talk to you now for a
24 minute about your familiarity with downloading music files from
25 the Internet and how that practice has changed over time. Are

1 you familiar with how different software or different
2 procedures have been used over time to download copyrighted
3 content over the Internet?

4 A. Sure.

5 Q. Please describe to the jury how the nature of that traffic
6 has changed over time since, say, the early days of the
7 Internet?

8 A. In the early days, if you wanted to transfer a file, you
9 typically transfer the entire file and you went out somewhere
10 and you asked for a file and received a file back. Then a
11 little fast forward a little bit in time to the '90s and you
12 start to see what's called a client server model. And so this
13 model was implemented in a way that you might actually receive
14 parts of the file for multiple computers. Early, early
15 toeholds that were in that direction were like Napster,
16 Grokster where you might communicate with a server that would
17 provide you content or you might communicate with a server that
18 would provide you information that would allow you to connect
19 to multiple places and pull that content down to get a little
20 bit faster download. And bear in mind that in the past,
21 network speeds weren't nearly as fast as they are now. So this
22 was a big improvement from the standpoint of how long it took
23 to get content.

24 Q. Looking at this next slide, Ms. Frederiksen-Cross, is that
25 what you were describing, the move from a central server base

1 to what are called peer-to-peer networks?

2 A. Yes, it is. In a peer-to-peer network, they're called that
3 because the computers serve as peers to each other. So any
4 computer can be both an uploader and a downloader, so I can
5 give you content and you can give me content. So unlike the
6 client server where I can give you a request and you give me
7 content, in a peer-to-peer network there's a more volatile flow
8 of information so the computers are actually exchanging pieces
9 of information with each other.

10 Q. You'll see on this slide it's representing a couple of
11 users that are on Grande's ISP and some that are not. Is there
12 any limitation on being able to communicate with peers inside
13 or outside your own ISP?

14 A. Not inside and outside your own ISP. Some countries like
15 Korea or China will block traffic from other countries, so
16 there are some geographic limitations in some cases, but the
17 whole concept of a peer-to-peer network is it's really you
18 should be able to talk to any other computer on the Internet
19 anywhere in the world, with the exception of those geographic
20 boundaries that are imposed by governments.

21 Q. Why would users be drawn to a peer-to-peer instead of a
22 central server approach to downloading music files?

23 A. Principally to get downloads faster, but in the case -- and
24 so for instance, that's been used in the distribution of the
25 popular operating system Linux, because Linux is a very large

1 package and if you use a peer-to-peer distribution, you can
2 download it much more quickly to your computer than if you're
3 getting it fed from a single computer.

4 In the context of piracy, it's also attractive because it's
5 much more difficult to detect, it's much more difficult to
6 interfere with that kind of traffic because you don't have a
7 single point that you can go after. You know, in the early
8 servers that were involved in or served the purpose of serving
9 pirated content, governments or legal entities could shut those
10 servers down once they became aware of them. In a peer-to-peer
11 network, it's much more difficult because there isn't a single
12 server to shut down. Once content is out there, it can be
13 exchanged freely between literally thousands or millions of
14 computers.

15 Q. Setting aside even you mentioned difficulty in shutting it
16 down, is it even more difficult just to observe what's going on
17 and monitor any potential piracy that's going on over
18 peer-to-peer networks?

19 A. Yes, it is.

20 Q. Why is that?

21 A. Again because there's not a single point of view you can
22 have really, you know, you're trying to -- in a client server
23 situation, you can observe what's going to the server and so
24 you can see who is asking for stuff and who is being sent
25 stuff. In a client server model, you have thousands, tens of

1 thousands, potentially millions of computers that are all
2 exchanging information. So where is your window to see what's
3 going on between any two computers. It becomes much, much more
4 difficult to understand.

5 Q. Next slide please. Please explain how BitTorrent arose in
6 the context of this peer-to-peer network sharing?

7 A. BitTorrent was developed by a gentleman named Bram Cohen
8 and his idea was to speed the transmission of data by taking
9 any particular big file and essentially carving it into pieces
10 and sometimes even sub pieces of those pieces and allowing
11 multiple computers that had copies of a piece to provide it to
12 each other. So he developed a protocol, the way that these
13 computers could communicate with each other that was based on
14 this concept of we'll have a file, we'll have a descriptor for
15 the file, think of it as a table that says piece one starts
16 here, it's so long, piece two starts here, it's so long, etc.,
17 and that way you could send a request for a piece to any
18 computer that had the piece. And so you didn't have to stand
19 in line in just one line, you could be getting things from
20 multiple computers simultaneously and you could also share what
21 you have with other computers simultaneously to your downloads.
22 So as soon as you got a piece, verified it was good, you could
23 be sharing that. So it made the distribution files much
24 faster.

25 Q. In recent years, has BitTorrent been the most popular, most

1 common peer-to-peer file sharing system?

2 MR. BROPHY: Objection, Your Honor, outside the scope
3 of her expert reports, "recent years."

4 MR. O'BEIRNE: I'll rephrase, Your Honor.

5 BY MR. O'BEIRNE:

6 Q. From 2011 to 2017, was BitTorrent the most common
7 peer-to-peer file sharing system?

8 MR. BROPHY: Objection, Your Honor, calls for
9 speculation.

10 THE COURT: No, she would have that answer I think
11 based upon her background. The objection is overruled.

12 A. In the early portion of that time period, there were other
13 peer-to-peer networks, e-Donkey and Aries (*ph*) in particular
14 that were also heavily used, but over time BitTorrent has
15 become the kind of central, the most heavily used of the
16 peer-to-peer networks that are used for file distribution.

17 Q. Ms. Frederiksen-Cross, you used the term "protocol".
18 Please describe to the jury what do you mean by protocol?

19 A. In computer science terms, protocol is an agreed upon way
20 of communication. So to go back to my analogy of the envelope,
21 it's a protocol when you are addressing a letter to someone to
22 put the return address up here on the upper left-hand side and
23 to put the recipient's address in the middle of the page and to
24 put your postage stamp over here to pay for it, but a protocol
25 is really just a fancy word that says this is how something is

1 going to communicate, this is the agreed upon format of the
2 messages or the format of how we're sending things and also
3 sometimes the specific commands that we're allowed to send
4 under that protocol.

5 Q. Is BitTorrent a specific kind of protocol?

6 A. Yeah, it's got its own very specific protocol that
7 Mr. Cohen initially developed and published.

8 Q. But BitTorrent itself is a file transfer protocol; is that
9 right?

10 A. That's its specific purpose is for not just the transfer of
11 files, but the exchange of files between peers.

12 Q. And I think you mentioned this. How is BitTorrent more
13 efficient than other alternatives for transferring files?

14 A. Well, I've already touched on the fact that it's speedier,
15 but it's also very reliable. So in BitTorrent, when you get a
16 piece of a file you have already had a descriptor, you heard
17 about the torrent file. The torrent file describes what a
18 particular payload is, what file or files it contains, how big
19 the chunks you should expect are and it also gives you a
20 mathematical hash value for each chunk so you have a way of
21 verifying that what you got is what you expected. So it's
22 faster, it's more reliable, it's more robust because say that
23 I'm trying to get a particular file -- I'm going to use the
24 Linux distribution here -- and you all have pieces of that
25 file. Well, if two of you shut your computer down or have a

1 power failure and you can't communicate with me, I can still
2 get what I want from the other participants in that network.
3 So it's also more reliable.

4 Q. And that reliability that you mentioned is based on its use
5 of hash values; is that true?

6 A. That's the greatest part of it, yes, the redundancy of
7 having many peers and the hash values to be able to ascertain
8 that what you got is what you expected that you got.

9 Q. I want to talk in more detail about hash values, but first
10 I want to walk the jury through how do you go about even using
11 BitTorrent in the first place?

12 A. Okay.

13 Q. What's the first step?

14 A. The first step would be you download BitTorrent software to
15 your computer, it's called a BitTorrent client. And so common
16 clients, there's one named BitTorrent, there's one named
17 uTorrent, there's a variety of transmission libtorrent, but you
18 would download one of these clients. And because they all
19 speak the protocol, it doesn't really matter which one you
20 download, they're all talking the same language, they can all
21 talk to each other.

22 Q. And where would one obtain BitTorrent software?

23 A. From the Internet. You just download it from the Internet.
24 Many of them are free, a few of the premium services that offer
25 special features you pay for, but there's a lot of free

1 BitTorrent clients out there.

2 Q. Once you've obtained the software, I presume you download
3 it on your computer and install it. Is that the next step?

4 A. That's correct. Yes, you download it, click on the
5 executable, it installs.

6 Q. And then once you've installed BitTorrent and you want to
7 start sharing files, then what do you do?

8 A. Say I want a particular song file, I could Google the name
9 of that song with the word "torrent" in it because that's the
10 name of the descriptor for the song or I could go to a place
11 like Pirate Bay or Kick-ass Torrents, there's a whole bunch of
12 these sites that are indexing sites that index literally
13 thousands and thousands of torrents and I just download it, so
14 click and download.

15 Q. You would have to go yourself and get a torrent file from a
16 website or some other place?

17 A. Yeah, if I was looking for something I didn't have, I would
18 have to go to a torrent file, download the torrent or, you
19 know, search for a torrent with the name of the file that I
20 wanted and download it to my computer. And then the next step
21 is to open that file in my BitTorrent software and that kicks
22 off a whole series of automatic actions that result in me
23 getting a copy of that file.

24 Q. By downloading BitTorrent software to your computer, are
25 you automatically importing your own collection of music that

1 preexisted on that computer into BitTorrent to share?

2 A. Not at all, not at all.

3 Q. You mentioned the concept of a torrent file, we're going to
4 talk more about it in a moment. But once a BitTorrent user has
5 downloaded a torrent file, what's the next step to obtain
6 whatever song or music they're looking for?

7 A. Just open that file in your BitTorrent client. And as I
8 said, that kicks into place a whole set of automatic processes
9 that result in the download of the file.

10 Q. Now, you mentioned there are these websites listing
11 thousands of torrent files. Those were created presumably by
12 somebody else and a user has downloaded the software and is
13 getting that torrent file.

14 Is it more common, in your experience with your knowledge
15 of BitTorrent, that users have created their own torrent file
16 or are downloading pre-existing torrent files made by others?

17 A. In context like this, it's more typical that they're just
18 downloading a torrent file that already exists so they can get
19 the file. In order for you to create a torrent file for a
20 particular payload, a particular song or piece of software or
21 book or whatever, you have to already have a copy of it, so if
22 you don't have a copy of it, the only way you can get it
23 through BitTorrent is to download somebody else's torrent and
24 get that copy.

25 Q. To create a torrent file, do you only have to have a copy

1 or do you have to do something with BitTorrent to make a
2 torrent file?

3 A. No, you have to actually take a specific action with
4 BitTorrent to create a torrent file if you had a file that you
5 wanted to distribute.

6 Q. In your experience and knowledge of BitTorrent, are most
7 peers trading torrent files they created or that they
8 downloaded from some other place?

9 A. Again if they're downloading it, by definition they didn't
10 create it because they didn't have it or at least by
11 implication. So they're getting a copy from somewhere else and
12 to do that they would have to first go get the torrent file,
13 open the torrent file and then allow the software to download.

14 Q. I'd like to show you, Ms. Frederiksen-Cross, a
15 demonstrative Grande has used in this case.

16 A. Okay.

17 Q. Bear with us, we're going to --

18 *(Pause.)*

19 Thank you. Ms. Frederiksen-Cross, you were here for
20 opening, were you not?

21 A. I was.

22 Q. And you recall this demonstrative being used by Grande's
23 counsel describing the content of a Rightscorp notice; do you
24 recall that?

25 A. I do recall that, yes.

1 Q. And you're generally familiar, obviously we're going to
2 talk in detail, but about the Rightscorp process of handshaking
3 with peers and obtaining information from them and generating
4 notices, correct?

5 A. Correct.

6 Q. And the first of three red underlined words there is that
7 *"the ISP account has been used to download, upload or offer for*
8 *upload copyrighted content."* Do you see download is first?

9 A. I see that.

10 Q. The peers Rightscorp was interacting with in generating the
11 notices that you've reviewed, is it more likely that those
12 peers created the torrent files they were transferring or
13 downloaded them from someplace else?

14 A. Based on the research I've done in the context of my
15 research into BitTorrent, it's more typical that someone is
16 using a torrent that they downloaded from someone else. And
17 again that's because if they're downloading, they're retrieving
18 content that they don't already have.

19 Q. So in the normal use of BitTorrent, if you've handshaked
20 with a peer and they're reporting having the bit fields of a
21 payload, they probably downloaded that payload from other
22 people in BitTorrent; is that fair?

23 A. That's the more typical scenario, yes.

24 MR. O'BEIRNE: You can switch back.

25 BY MR. O'BEIRNE:

1 Q. You had mentioned torrent files. Turning to this next
2 slide, please describe to the jury, they've heard some
3 testimony about it, but in your words, what is a torrent file?

4 A. I want to be careful with terminology here because torrent
5 is used somewhat ambiguously, so I'm going to try to say
6 torrent file when I'm talking about this particular file. You
7 might hear me say ".torrent" file too because it's a
8 blah-blah-blah ".torrent."

9 The torrent file, first and most importantly, is not the
10 content, it is not the payload, it's not the song or the
11 software or the book that you're trying to download. What it
12 is instead is a file that's used to help you find that content.
13 And so it has two principal portions. One of them is the
14 location of one or more trackers. And you may have heard
15 Mr. Boswell use the term "announcer" for that. The terms mean
16 the same thing. It's a server somewhere out there on the
17 Internet or a machine somewhere out there on the Internet that
18 contains torrent files -- I'm sorry, that responds to requests
19 from torrent files that can give you a list of peers who are
20 currently participating in the exchange of a particular
21 payload. So it's -- the torrent file doesn't have the payload
22 in it, it has how you get to the tracker and then it also has
23 information about what the payload is. That would include
24 things like the file name, the size of the pieces that each
25 file is carved into and then that sort of table I was telling

1 you about that has this is piece one, here's its hash, this is
2 piece two, here's its hash. And because the pieces are all the
3 same length, it can use that table later when it gets the
4 pieces not only to validate the piece, but to know how to put
5 Humpty Dumpty back together again so you can reassemble the
6 pieces you got into the playable song or readable book.

7 And, oh, I should note that when you open a torrent file,
8 it starts the download of the content. I mean, that's all
9 that's required to start the download. You don't have to know
10 where the tracker is when you open a torrent. You, the person,
11 doesn't talk to the tracker yourself, software does all that
12 for you.

13 Q. You used the term "hash value", we've heard some testimony.
14 Please describe to the jury in your words what is a hash value?

15 A. A hash value is a mathematically derived value, it's
16 typically a long string of letters and numbers because it
17 represents the hexadecimal value that was generated
18 mathematically based on the contents of some particular thing
19 it was -- that the hashing algorithm was pointed at. So it
20 might be a file or it might in the case of BitTorrent, I'm
21 going to use that word in two ways. There is the info hash
22 which is the identifier for a particular torrent and then there
23 is the piece hash which is the hash value that allows you to
24 verify a particular piece. And I'll try to be really careful
25 with my language so I don't make that confusing.

1 Q. Are you aware who created the most commonly used hash
2 algorithm?

3 A. There are many commonly used hash algorithms, many of which
4 were created by the U.S. Government in order to both validate
5 the content of messages that are sent and also to provide sort
6 of an anti-tamper mechanism. And so they're commonly used in
7 your financial transactions, they're used in any kind of
8 secured communication, but it's a way to validate that
9 something has been received unaltered.

10 Q. When you mention the government, particularly agencies in
11 the government rely on hash values?

12 A. Many different particular agencies rely on hash values,
13 yes.

14 Q. Are you aware that they're used in criminal prosecutions?

15 A. Yes, they are. They're identified, for instance, or used,
16 for instance, to identify things like child pornography or also
17 used to identify certain financial transactions that might be
18 suspect. I use them very routinely, the National Institute of
19 Standards and Technology publishes lists of hashes of known
20 files. So, for instance, all the files that make up the
21 Windows or Macintosh operating systems, each one will have a
22 hash, so if I'm examining a hard disk, I can tell what files
23 are just the business of the hard disk or which ones don't have
24 the hash expected and may have been modified by malware. And
25 then so I can separate things that a user may have created from

1 things that are just expected to be on the system.

2 Q. And would a file's hash value change over time if it stays
3 the same -- if the file doesn't change, does the hash change?

4 A. If the file contents stay the same, even if the name
5 changes, the hash will be the same because it's mathematically
6 derived from the contents. And as long as the contents don't
7 change, that file's hash will be the same. And that's why it's
8 so useful for identification in duplication because if two
9 files have the same hash, there's only an infinitesimally small
10 chance that they have different content.

11 Q. When you say infinitesimally small, how small are we
12 talking?

13 A. Depends on the hash, but say one followed by 26 to 50
14 different zeros. Just a really, really, tiny, tiny chance that
15 they've been compromised. You know, different hashing
16 algorithms have -- use a larger hash. And the larger the hash
17 that is generated the more secure it is because the less chance
18 that there could be a collision in natural space.

19 Q. You described it briefly, but for the jury's benefit, how
20 does BitTorrent use hash values, torrent hash and piece hash in
21 order to perform its file copy?

22 A. The torrent's info hash is used as a unique identifier for
23 a particular torrent and a particular payload. The piece hash
24 is used to identify the individual pieces to ensure that
25 they're not corrupted. And one of the fundamentals of the

1 BitTorrent protocol is that if I'm running BitTorrent, I won't
2 make a piece available to anyone until I have verified its hash
3 and I won't save it on my system until I verify the hash. So I
4 download a piece, I run the hash algorithm against the piece --
5 again this all happens automatically. And then if the piece --
6 and I compare that piece hash to the piece hash I got from the
7 torrent file. To say yep, this is what I expected, it wasn't
8 corrupted, it wasn't broken in transmission, it isn't fake.
9 This is what the torrent file said it should be and it matches,
10 so it's good, now I can share it with others and I can save it
11 safely to my system.

12 Q. Fair to say that if a BitTorrent user is reporting having
13 bit fields to another user in a handshake, those bit fields
14 have been checked against the hash by BitTorrent automatically
15 to make sure that the bit fields that it's reporting are
16 exactly the bit fields of that torrent hash?

17 A. Yes, in all of the client software that I have inspected
18 and also in the protocol as it's set forth in the protocol,
19 once you verified the hash of the piece, then you update your
20 bit field to indicate, you know, basically you're putting a
21 hash mark in there, not to reuse that term, you're putting mark
22 in there that says now I have this piece. And in a BitTorrent
23 protocol, you initially report to another peer that you're
24 talking with which pieces you have so they can see if they're
25 interested in asking you for any of them and they report theirs

1 to you, same thing, so you can see if there's anything they're
2 offering you're interested in. And they know you have it
3 because you verified it and you do that before you update the
4 bit field.

5 Q. And again these processes are occurring automatically, the
6 user doesn't have to do anything?

7 A. The user doesn't have to do anything.

8 Q. We've heard it, but just to be clear, is there a term for
9 whatever file is being copied using the torrent file, the
10 underlying file that's being obtained, is there a term for
11 that?

12 A. It's often called the payload. Sometimes it's just called
13 the file, but the payload is kind of the preferred term because
14 sometimes it's also referred to somewhat confusingly as the
15 torrent. So the torrent can mean the swarm of peers that are
16 communicating, it can mean the torrent file, it can mean the
17 payload. I'm going to call it payload to avoid that confusion.

18 Q. So we talked earlier about somebody wants to use
19 BitTorrent, they download the software, they obtain a torrent
20 file and they open it on their computer; do you recall that?

21 A. Yes.

22 Q. What happens -- what's being depicted in this slide after
23 the user opens the torrent file on their computer having
24 downloaded it?

25 A. Well, at the beginning the zero percent at the top, I don't

1 have any part of the file, but I've downloaded the torrent and
2 I've opened it, so now I want the pieces of the file. And so
3 the client software on my system gets a list of peers from the
4 tracker and then it begins to set a series of communications
5 with those peers. So it will make connections to those peers
6 and will do that handshake I talked about that where I give you
7 a list via a bit field of what pieces I have and you give me
8 the list you have and we can begin exchanging pieces. And then
9 as I get pieces, I will also signal to the peers that I'm
10 connected to, Oh, I have this piece now, I have this piece now.

11 And each peer maintains a list, not only of what it has,
12 but of what each peer that it's connected to has, so that if I
13 need piece seven, I know I can ask one of these peers that's
14 told me it has piece seven for that peer.

15 Q. Generally speaking, for an individual song as a payload,
16 about how long after a file began to be copied through
17 BitTorrent would the user receive the completed file?

18 A. Based on --

19 MR. BROPHY: Objection, Your Honor, vague and calls
20 for speculation.

21 THE COURT: Yeah, it's too broad.

22 MR. O'BEIRNE: Let me be more specific.

23 BY MR. O'BEIRNE:

24 Q. Given a high-speed broadband Internet connection and home
25 Internet available to most people in 2015, '16, say, with a

1 BitTorrent user using BitTorrent downloading a one song
2 payload, do you have an opinion as to about how long that would
3 take given normal network traffic?

4 A. I have run tests to determine that and it's typically
5 between about 20 seconds and less than a minute if it's a
6 popular song. If I'm asking for something from the '30s that
7 there maybe aren't as many computers trading, it may take
8 longer to download, but if it's something that's current and
9 popular, most of my tests are between 20 and 40 seconds, for a
10 song. A movie takes longer, of course.

11 MR. O'BEIRNE: Your Honor, I know we mentioned we were
12 going to end right at three. This would be a natural time to
13 break in the testimony if Your Honor thinks that makes sense.

14 THE COURT: It does, because she's going to have to
15 come back at some point.

16 MR. O'BEIRNE: That's our plan, Judge.

17 THE COURT: Okay, well, thank you very much, ladies
18 and gentlemen. Remember my admonition to you that you are not
19 to speak with anyone about the case. You can't tell them what
20 it's all about. You certainly can tell them that you're, as I
21 presume you already have, that you've been selected as a juror
22 in federal court, it's a civil case and that's all you can tell
23 them. You can, as I told you before, go to work on Monday. I
24 promise you, I'll be working on Monday, so you need to go to
25 work on Monday, all right, if you want to. You don't have to,

1 but you won't be paid here as a juror, okay. So you need to
2 know that. Other than that, we will see you at your regular
3 time on Tuesday morning and we're going to continue with --
4 we'll be continuing with this witness?

5 MR. O'BEIRNE: Yes, Your Honor.

6 THE COURT: Okay. We're going to be continuing with
7 this witness on Tuesday morning. Thank you. You may be
8 excused.

9 COURT SECURITY OFFICER: Please rise for the jury.

10 *(2:50 p.m., the jury exits the courtroom.)*

11 * * *

12 THE COURT: Okay. Please be seated. Is there
13 anything that you would like to cover with me before we recess
14 today?

15 MR. BROPHY: Nothing from Grande, Your Honor.

16 THE COURT: If anything does come up that you want to
17 address with me, say on Monday, get a hold of Ms. Springs. I
18 should be in the San Antonio federal courthouse on Monday and
19 then of course at some point I'm going to be driving up here.
20 Okay? All right. Have a good weekend. Thank you very much.

21 COURT SECURITY OFFICER: All rise.

22 *(2:51 p.m.)*

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UNITED STATES DISTRICT COURT

WESTERN DISTRICT OF TEXAS

I certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter. I further certify that the transcript fees and format comply with those prescribed by the Court and the Judicial Conference of the United States.

Date signed: November 5, 2022

/s/ Angela M. Hailey

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